BULLETIN

MADRAS DEVELOPMENT SEMINAR SERIES

VOLUME III NUMBER 8 AUGUST 1973

74, SECOND MAIN ROAD, GANDHINAGAR,

ADYAR, MADRAS-20.

MONTHLY BULLETIN

Vol. III No. 8

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EDITORIAL—SOME HIGHLIGHTS

I. General Economic Scene

State

Fifth Plan: The finalisation of the Fifth Plan is proceeding as the Departmental working groups and sub-groups are reporting the results of their examination of the Draft Fifth Plan sections to the State Planning Commission. Further work has been done by the Departments and the Commission on the minimum needs programme for the Fifth Plan of the State. This has been somewhat of a wasted motion as the Union Planning Commission had taken the position that the programme should be subsumed within the total Fifth Plan allocation, and more recently has hinted that with the deteriorating resource position, the minimum needs programme will have to be reduced,—particularly its education and health component in preference to those which are production oriented—such as housing, roads, and drinking water. While there may be a justification for this position on grounds of declining real resources, it raises a question as to the whole basis of the programme—which was conceived as a package to combat and compensate poverty (see Vol. II No. 6 page 8 and No. 11 pages 6-10 of the Bulletin). In the event, the outcome of the decisions in the State was a Rs. 700 crore minimum needs programme, which a review with the Union Planning Commission led to a cut back to Rs. 280 crores. Now the Union Planning Commission has notified the State Government (as they have all other State authorities) that the Fifth Plan should be prepared *within* the total allocation of Rs. 1,100 crores which is about double the Fourth Plan allocation) and within that amount the minimum needs programme should not exceed Rs. 140 crores. Given the various unknowns, the non-plan commitments, the gaps, the resources to be mobilised, (all of which will begin to take quantitative shape when the Sixth Finance Commission reports in September), and other unknowns such as the foreign exchange gap, etc. and the time constraint that the draft Fifth Plan must be published in September, the Union Planning Commission has made the best guess it can. Its planning figure directive to the States marks an advance over the Fourth Plan procedures in that there is something firm for the State to use in planning—apart from its own hunches and guesses followed by bazaar bargaining. Now the State Planning Commission will have to readjust its Draft Plan which was of the order of Rs. 1,300 crores to fall in line with the ceiling of Rs. 1,100 crores. The minimum needs programme now ceases to be a serious input in the Plan.

Perspective Plan: The Science and Technology component of the perspective plan is being developed on the basis of policy directives established at first meeting of the follow up committee (see Vol. III pages 365-366 of the Bulletin). These directives are: (a) the R & D programmes should be established on an expanding science and technology infrastructural base in the State; (b) every R & D programme before approval should be subjected to cost benefit analysis or

cost-effectiveness examination during its currency; (c) all R & D projects should be derived from and subsumed within the Plan objectives; (d) R & D projects should follow an inter-disciplinary methodology and should be problem-oriented; (e) to avoid the problem of forging links between R & D centres and production units a beginning should be made in locating such units in the industry concerned. On this basis 14 working groups of scientists and Government department officials are at work elaborating the R & D projects in

- Agriculture and allied activities including forestry
- Animal Husbandry
- Fisheries
- Irrigation
- Industries—large, medium and small—including minerals
- Fuel and Power
- Health
- Nutrition
- Education
- Water supply
- Roads and bridges
- Housing
- Urban planning
- Management and overall goals.

Simultaneously a critical appraisal is being made of the current state of science and technology in the State with a view to identifying the constraints, relate the proposed R & D programme to the existing infrastructure and plan for breaking its bottlenecks so that in the latter part of the perspective plan period, some of the deferred projects may be taken up. The Science and Technology Plan for the State on which the consultation, summarised in the Vol. III (page 365) of the Bulletin, resulted in the document—An Approach to Science and Technology Plan for Tamil Nadu—published by the Planning Commission, will be finalised by the end of July and will be a major input in the State's Fifth Plan and Perspective Plan and the National Science and Technology Plan.

Power: In the State, June ends with a supply of an additional eight lakh units of power daily to defence oriented industries, cement units, plantations and textile units from the power now being generated from the irrigation discharges of the Mettur, Periyar, Papanasam and Sholayar dams. The South West monsoon became active from mid-June in the catchment areas of the Cauvery and the Hemavathy in Mysore State and in the hydel areas of Mukurti, Pykara, Upper Bhavani and Kundah in the Nilgiris in this State. Mettur at June 19 had a storage of 45.220 million cubic feet (against a 93.470 cmc.ft capacity), Papanasam stood at 114 feet against the full 151 feet and Periyar and Vaigai releases were also begun. Towards the end of June, however, the rainfall had decreased so that the hydel reservoirs in the Nilgiris areas had only slightly improved their storage. Against the 2,244 million units of hydro electric reservoir capacity, the storage at June 25 was only 378 million units. Hence June closed with no relaxation of the 75 per cent cut for other categories—particularly the HT industries, which badly need power. The 8 million units per day for the four groups emanate from the irrigation discharges of the four dams referred to earlier. In fact the coexistence of these discharges and the power cut has caused a technical problem for the State Electricity Board—that of finding a load for the generation at night. Ennore's fourth unit went into operation on June 14, increasing the installed capacity of the station to 340 MW and generating 230 MW which should increase to 300 MW by early July. Incidentally this increased generation depends on the regular supply of coal to the station and the complaints

of the Southern Railway that the coal wagons are not being unloaded by Ennore and Basin Bridge speedily, that the wagons released are only half the normal, are serious and must be speedily corrected. Neyveli has been generating 400 MW and feeding 330 MW into the State grid right up to mid-June. Basin Bridge has been supplying 50 MW. Thus the thermal generation was 610 MW. This had already led to removal of all restrictions on supply of electricity to rice mills, flour mills and oil mills, a reduction of the power cut from 75 per cent to 50 per cent to small industries and the withdrawal of the 25 per cent cut on domestic and commercial users in Neyveli. With these relaxations, the thermal generation of 550 MW-610 MW and the hydel generation from June 25 from Mettur and Papanasam of 200 MW do not pose a problem during the day. But a load of 550 MW is being maintained at night with difficulty. Anything beyond that is involving reducing the thermal generation—Ennore was reduced from 230 MW to 20 MW" and Neyveli from 330 MW to 100 MW. In addition, the Electricity Board is examining the possibility of regulating the irrigation discharges which the irrigation authorities are rightly resisting, and negotiating with the neighbouring States the possibility of absorbing some of the night load. Mysore is willing to continue to absorb some surplus power during the night to be used as peaking assistance. Even this is limited and Andhra Pradesh and Kerala have expressed their inability to take on any power at night. The real solution is for the power demand to be evened out as between day and night use which will involve more night shifts in the textile mills and cement plants and some of the agricultural operations. That is the only way of dealing with this technical problem —and not to adopt short term solutions like reducing thermal generation which has been built up with great effort or through the slow down of irrigation discharges. Once the storage position comes to normal which should be by the middle of July, the normal power demand of 22.5 million units per day should be fully met and the industries including HT consumers allowed to operate night shifts fully. Inter-State power cooperation referred to in the last issue (page 399) continued with Kerala supplying from June 12, 2 lakh units more, making a total supply of 7 lakh units per day. The accident to the Nasik transmission lines led to closing of the Tarapur units so that the 3 lakh units from Maharashtra to this State could not be supplied. The last six months of power shortage has affected production in the State in varying ways. The automobile ancillaries units were least affected as they provided themselves with their own generators and brought to their production qualities of resourcefulness and perseverence particularly in finding markets away in the North, enthusiastic cooperation from labour, coordination between feeder and main session and close working with the State Electricity Board. The following table shows how the ancillaries fared:

Ancillary Unit	*Products*	*Power*		*Production as per cent of normal level*
		From Electricity Board	*One generation or use of engines for compressors*	
Lucas TVS, Padi	Starter motors, generators distributors, etc.	25	60	75
Wheels India, Padi	Automotive Wheels	25	40	60
Brakes India, Padi	Brakes and parts	25	40	50
Rane (Madras) Valachery	Tie road ends, steering linkages, etc.	25	60	85
Sundaram Clayton, Padi	Air brakes	25	40	60
Rane Brake Linings, Ambattur	Brake Linings	25	60	85
Engine Valves, Valachery	Valves	25	75	100
Jonas Woodhead, Thiruneermalai	Leaf springs	26	50	75
India Pistons, Sembiam	Piston assemblies	25	—	20
IP Repco, Thiruvallur	Ring gears	25	75	90
Bimetal Strip Mill	Strips	too low for operations	—	—
Union Company	Carburettors	25	75	100
Hydraulics	Shock absorbers	25	75	100

On the other hand, other lines of production have suffered heavily. Textiles even with their own generators and some supplies from Maharashtra suffered 65 per cent decline in production, and heavy chemical and cement units produced at 30 per cent capacity. Further to the two projects approved In February (see Vol. III page 229), during June, 2 more rural electrification projects covering 137 villages in North Arcot and Chingleput districts which will energise 800 pumpsets, extend power to 86 small and agro-industries to provide 4,000 domestic and commercial connections and 290 street lights were sanctioned by REC, involving a total of 23 REC assisted projects in the State. These two projects will cost Rs. 29 lakhs and will be executed during the Fifth Plan. The rural electrification programme is a priority for, in the country as a whole, while 80 per cent of the people live in villages, only 10 per cent of the power generated is available to them. This State has a more reasonable ratio but there is the problem of supplying power to the villagers at cheaper rates. The minimum consumption guarantee and the minimum charges which they are required to pay bear heavily on them as their consumption

of irrigation water is limited to 2 or 3 months and the daily supply to 2 or 3 hours. They do not consume the minimum. During the power cut this minimum charge has been waived but there is a case to supply small farmers at lower rates than that charged to industry. The State Government is therefore urging the Union Government to clear quickly its power schemes; (a) the Tuticorin thermal plant, (b) the Mettur thermal plant, (c) the second mine cut at Neyveli, (d) the import of machinery and equipment for the Kundah Stage IV project and (e) the small power stations at seven places like the 45 megawatt hydel scheme at Surul-lyar. The State has also made a plea for a second nuclear power plant but the claims of other regions are likely to receive precedence in this matter.

The power situation in the country is equally sombre. The gap between targets and performance is daily widening. The Fourth Plan target was set at first at 23 million KW and later at 20 million KW (see Vol. III pages 7 and 313). However, it now looks as if we will achieve only 19.45 million KW. In 1972-73 against a target of 1547 MW only 572 MW was generated. Two projects—the Badarpur and Obra thermal station—showed no progress and the Chandrapur unit of DVC did not materialise. For this year the additional capacity, including last year's spill over, to be set up is 1.9 million KW for which a provision of Rs. 687.39 crores has been made (Rs. 357.17 crores for generation, Rs. 206.07 crores for transmission and Rs.107.45 crores for rural electrification). Whether we will achieve this target will depend on hard and sustained work during the remaining nine months. The suggestion that only 65 per cent of it will be achieved must be rejected and all efforts concentrated on completing the projects. Meanwhile we seem to be going from target to targets. The seventh annual conference of the Chairmen of the State Electricity Boards reaffirmed the Fourth Plan reduced target of 20 million KW, when it is clear that that will not be achieved, referred to the 17 projects to be completed this year to produce the 1.9 million KW and recalled once more the doubling of the target for the Fifth Plan. Here again the Fifth Plan programme drawn up by the Union Ministry of Power and Irrigation has reduced the Fifth Plan target to 38 million KW. This addition of 18.55 million KW generation is to be ensured by four types of schemes: (a) those under consideration; (b) those sanctioned; (c) those approved by the Technical Advisory Committee but not yet sanctioned by the Union Planning Commission; (d) schemes to be processed by the committee. These four schemes will cost Rs. 2,420.66 crores including Rs. 306.78 crores in the Central sector. These plans are good but what is needed is construction now on the sanctioned scheme. In fact the Planning Commission has suggested that the power target of the Fifth Plan be reduced to 33 million KW (which is itself a 250 per cent increase over the Fourth Plan performance) against the 40 million KW demanded by the Ministry of Irrigation and Power, with the directive that the existing projects improve their proficiency. In the opinion of the Planning Commission a 33 million KW capacity at 80 per cent utilisation will meet the Country's demands fully even if the industrial growth registers a high 12 per cent per annum during the Fifth Plan. The final decision on the Ffth Plan target is still awaited. For the Ministry of Irrigation and Power, in addition to the current reasons for our poor power performance, failure of monsoon, bad planning, delays in construction, delivery delays in equipment, transmission losses, scarcity of steel and cement, a new reason has been advanced, namely, that

there are as many as 20 agencies responsible for power generation in the Country. The need for regional and zonal coordination has been stressed in earlier analysis (see Vol. III page 230). Now "Central management" of power generation and transmission is proposed and for this purpose it is suggested that a national policy resolution on power be adopted which will (a) detail the priorities for the use of power and (b) redress imbalances between States through the Union Government's power sources. Some of this is needed. We need demand surveys for power and energy, assessment of energy resources, coordination of power development with manufacture of power equipment, supply of steel and cement and fuels for thermal stations. These techno-economic studies and coordination should be effected by the Centre. But the take over of power generation by Union Government, leaving State Covernments only with distribution responsibilities and the proposal for a national grid before the regional grids are developed are not helpful or practical suggestions. The July meeting of State ministers of power should first set up a standing committee of Union Government departments dealing with cement, steel, and coal to ensure speedy supply of these to the ongoing and approved projeets. Other issues that they should discuss and decide on is how the Fifth Plan generation of 18 million KW can be ensured, how transmission losses can be reduced and the establishment and working of regional grids. It is too late and dangerous to indulge in any more talk about targets, slippages, machinery for planning etc. The losses suffered by the economy from this single factor raise the question as to whether there should not be a separate Union Ministry of Power. Nuclear power is also passing through a critical phase. The closing of the Tarapaur Plant twice in June because the infrastructure (outside of the plant) was defective, the shortages in alloy steel needed for the setting up of new plants, the problems being faced by the Rajasthan plant which is producing 52 to 60 MW, the hold up in Kalpakkam construction due to cement and power shortages and the lack of plants for fabricating the quality of pumps and castings that the nuclearstations need are negative elements which must be overcome within the coming year so that mid way in the Fifth Plan nuclear power can make its contribution to meeting our mounting power demands.

Demand and Food Consumption : Two recent surveys throw light on the demand function and state of food consumption in the State. The demand picture is one of 15-30 per cent decline in consumer durables —electricals, radios, utilities, ready made garments. Hire purchase units have registered a fall of 15 to 20 per cent and a doubling of the rate of defaults in payments. The fall in demand for cycles, wall clocks, chairs is matched by the reduced supply coming on the market. Electric bulbs and tubes which now last longer with the power cut as well as fans have slumped by 25 to 30 per cent. General stores and those dealing with toilet preparations, tooth pastes, cheap soaps and hair oils as well as general merchandise have experienced a fall in demand by 20 to 30 per cent. On the other hand the demand for luxury goods like terylene and terycot, silk sarees, high quality soaps and creams and generally the shops which cater to the upper income group have not had a fall in demand. There are two general features that stand out in this survey. First the effects of the power cut and the lay off of workers has reduced the demand and standard of life of the lower income group and the working class. The richer classes have not been seriously affected. Second the fall in

demand in the urban agglomerations has forced the hire purchase companies and merchants generally to find new markets in the rural areas, so that in the long run there may be some closing of the gap between urban and rural offerings of consumer goods and durables. The other survey relates to the food consumption of the people of Tamil Nadu. Adults in this State consume daily an average of 2,110 calories against the required 2,600 calories and 61.6 grams of proteins against the needed 55 grams, while in Kerala the adult consumption is 1,890 calories and 49.2 grams of protein compensated in part by the fairly widespread consumption of fish. The calorie consumption of school children in this State is highest among the Southern States at 1,560 calories and so is the situation of their protein consumption at 45.7 grams. Among pre-school children where also Tamil Nadu does better than other States, the calorie consumption is 950 and proteins 7.8 grams. The State's per capita cereal consumption is 439 grams, but is heavily one cereal, rice at 400 grams. The State also has the highest per capita consumption of pulses at 56 grams but unlike the three other States has the lowest consumption in the rural areas at 12 grams. The State has the lowest per capita consumption of oil and fats at 10 grams and animal foods at 11 grams. Consumption of milk and milk products is the lowest at 40 grams against the required 200 grams. Finally in green leafy and other vegetables, the State average per capita consumption of 12 and 33 grams is the highest in the South but a mere fraction of the required 150 grams for each. Some of this data will be useful in the programme to provide the poverty sector with the minimum consumption goods and in the applied nutrition programme for the vulnerable section of the State's population.

Prohibition and New Taxes: The Government has decided to reintroduce prohibition by stages and in accordance with this policy has decided to close down all toddy shops in the State (3,800) on September 1 when their licenses expire. This will involve a loss of revenue of Rs. 11 crores per annum. To compensate for this income reduction, by ordinance the Government has increased, under Tamil Nadu Sales of Motor Spirit Taxation Act, from July 1, the tax on petrol from 12 paise to 15 paise per litre and on diesel oil from 10 paise to 13 paise per litre. Also from July 10 a new entertainment additional surcharge on cinema tickets is to be levied at the rate of 10 paise for tickets upto 1 rupee, 20 paise for tickets between 1-3 rupees and 30 paise for tickets above Rs. 3. These two tax increases will bring in Rs. 4 crores in a full year. For this year the tax loss will be Rs. 6.5 crores and the proceeds from these two taxes will amount to Rs. 2.5 crores. In addition the government has issued the Indian Stamp (Tamil Nadu Amendment Ordinance) of 1973 under which there will be a 1½ per cent additional duty on the instruments of conveyance which do not constitute transfers. There will be other increased levies as the prohibition policy is put into operation.

Tenancy Bill: The Cultivating Tenants Bill (see Vol. III page 318) will in its working affect the income position of some 300 temples mainly in Tiruchi and Thanjavur, if the tenants cultivating the temples lands purchase them. The temples will then lose their annual income and their upkeep will become difficult. Action has been taken by the Government to identify the lands which originally belonged to the temples but which had been misappropriated by private persons resulting in heavy losses to the temples. The Government is now restoring these lands to the

temples and has under study ways and means of safeguarding the income of the temples within the framework of the Act. The temples are also moving in the direction of providing people with social services, 50 of them being used to implement the scheme of free distribution of milk to poor children. There are also discussions under way between the Government and agriculturalists on the working of the Act in rural areas, the problem of repayment of cooperative loans in drought affected areas and the growing rural indebtedness among the small farmers.

Housing: The Tenants Kudiyiruppu Act referred to in the last issue (page 401) is being supplemented by the Union Government's scheme for providing free house sites to all landless poor persons. Coimbatore which has completed action under the Act under which 8,000 acres were involved, has how begun a census of all houseless poor in the district. On the basis of its results. land will be acquired and developed by the Housing Board in order to allot each of the 1.5 lakh families 2-3 cents each and a financial aid of Rs. 150. A further development is with regard to the Rs. 10,000 house scheme of the Tamil Nadu Housing Board (see Vol. III page 317) where the first step in the decentralisation of the revenue work of the Board has been taken. From June 1 collection centres have been opened in each housing area so that the members can pay the monthly instalments or rents easily and on time. This is a sound move in this Rs. 3 crore house building programme which spans the entire State. Within this programme, the National Building Organisation is helping the Board to construct 144 flats with the pre-fabricated materials developed by the CSIR Structural Engineering Research Centre at Madras. The walls of these houses are using hollow clay blocks along with concrete which will both save cement and provide high insulation, The Centre is also helping construction agencies in this and other States to adopt pre-fabricated methods to save scarce materials such as steel and cement. Further HUDCO has sanctioned the Tamil Nadu Housing Board a loan of Rs. 7.22 lakhs to set up a semi-mechanised brick plant, in addition to the Rs. 14 lakh loan for a wood working unit referred to in Vol, III page 164 of the Bulletin and the cellular concrete plant based on fly ash and lime technology at Ennore.

Transport: As from May 1, Mysore and Tamil Nadu entered into an inter-State transport routes agreement on the basis of parity of service kilometerage for stage carriers, public carriers, oil tanks and taxis. The agreement not only simplifies and regulates permits and taxation procedures but lays the basis for expanding trade between the two States. The Government has set up a Transport Development Council with the Transport Minister as Chairman and with representatives from road transport, railways, airports and the Union Ministry of Transport and Shipping and representatives of automobile plants. The Council will eliminate wasteful competition between various transport services and promote effective coordination between them—a much needed development in the State and Country.

Social and Cultural Development: From June 3, the 1,294 hand drawn rickshaws in the city were withdrawn and replaced by cycle rickshaws which were provided under the Chief Minister's scheme for rehabilitation of rickshaw pullers. This much needed social reform is extended to the whole State from July 1 and will involve the withdrawal of 2,000 hand rickshaws outside of Madras city, The scheme introduced in Madras was

based on 46 of 1,294 hand rickshaws being owned by the pullers and the rest owned by 589 persons who let them out to the workers. The 46 owner rickshaw pullers were presented with a cycle rickshaw each; those owning upto 3 rickshaws were given one cycle rickshaw; those between 4 and 8, 2 cycle rickshaws; those owning more than 9, 3 cycle rickshaws. They were given Rs. 200 in cash for every new cycle rickshaw to be purchased and bank credit arranged for the remaining Rs. 800 (each cycle rickshaw costing Rs. 1,000). Another social scheme is nationalised banks loans to leprosy affected beggars who are being rehabilitated in the Government run beggars homes (see Vol. I No. 8 page 9, also last issue page 402), Youth Corps Volunteers and physically handicapped persons. These loans are meant to set these persons in various forms of self employment such as shops, small trade, etc. Tourist development of the State's hill stations—Kodaikanal and Kotagiri and the Wynad generally received a boost from the well organised summer festival in Ootacamund. One indication was the doubling of the receipts of the Government tourist bungalow this year in Ooty compared to last year. What is now needed is the building of tourist hostels and hotels in all 3 hill stations and a well organised and adequately spaced out programme of attractive events in these places. Another problem claiming attention is the environmental pollution, being caused by 400 industrial units ranging from tanneries to rayon pulp manufacture. The river system of the State is heavily polluted by industrial waste and ground water dissolved solid content—with the danger of pulluting ground water. The main pollutants are the tanneries concentrated in Ambur, Vaniyambadi, Ranipet and other areas, the Sago unit in Salem, the paper and pulp factories in Erode and Udumalpet and textile bleaching and dyeing works in Mettupalayam, Bhavani and Ambasamudram. Unlike the Sakthi Sugar Factory (see Vol. III page 345) the sugar factories in Chingleput, Coimbatore, Tiruchi and North and South Arcot districts, the fertiliser factories in Madras and Ranipet and the viscose plant at Mettupalayam add to the pollution problem. Industrial wastes have contaminated our rivers—Bhavani, Cauvery, Amaravathy, Vaigai, Tambaraparni, Palar and Vellar. It is proposed that air monitoring stations be established to monitor the pollution levels, air pollution control equipment be manufactured locally together with a central authority to coordinate study, and undertake data collection. The control of pollution will require equipment, costing Rs. 5 crores which should be shared on a 50-50 basis by the units and the State Government.

National

Annual Plan: The annual plan for the current year—1973-74—which is the last year of the Fourth Plan and has special significance as it provides the base for the Fifth Plan has now been finalised. There is a slight increase in the total outlay from that indicated in the budget (see Vol. III page 235) to Rs. 4,364.24 crores, with the State's share of Rs. 1,836 crores including Central assistance of Rs. 855 crores. The Rs. 700 crores outlay for industry and minerals with 28 per cent allocation to steel, 13 per cent for fertilisers, 10 per cent for petroleum and 9 per cent for non-ferrous metals aims at a steel ingot production of 7.8 million tonnes and 70-80 per cent capacity use, production of 1.4 million tonnes of nitrogen and 0.4 million tonnes of phosphoric acid, with completion of 8 lakh tonnes nitrogen capacity fertiliser plants, 18 million tonnes of cement, 40 million tonnes of iron ore, 28.3 million tonnes of crude petroleum

and petroleum products and 8,00,000 tonnes of paper. The agricultural sector provides for 115 million tonnes of food-grains, 9.5 million tonnes of oil seeds, 13.5 million tonnes of sugar, and cotton and Jute of 6.5 million bales and 5.6 million bales, with an allocation (Central and States) of Rs. 775.58 crores. Irrigation and flood control are allocated Rs. 294 crores for providing minor irrigation to 1.5 million hectares (making a total of 7.2 million hectares) and major and medium irrigation to cover 1.06 million hectares and 1.21 million hectares, with preference to drought prone areas. For power the year's allocation, as earlier pointed out, is Rs. 687 crores for increasing power generation from 17.53 million KW to 19.45 million KW and to energise 3 lakh pumpsets over 13,000 villages. The Transport and Communications programme involves a near trebling of wagons acquisition by the railways (from 12,000 last year to 30,000 this year), the development of rural roads and the increase in shipping tonnage from 2.62 million grt last year to 3 million grt at the end of this year. Education has emphasis on elementary education, vocationalisation of university curricula, 3 lakhs additional higher education enrolment plus the Rs. 100 crores for the employment of 5 lakh educated unemployed. Health provisions include an intensified family planning programme, the opening of 202 more primary health centres (in addition to the existing 5,195) and the attainment of the 25,900 beds target. How far these targets and programmes are being achieved can be seen in the section reviewing progress under the national production front.

Fifth Plan: A number of new and recent factors have to be taken into account in the on-going work on the Fifth Plan—factors which were not visible and/or taken into account in the excellent approach paper to the Fifth Plan (Vol. II No 12 pages 8-10, Vol. III pages 12-14 and 165-167). Some of the issues within the framework of the approach paper on which further work is needed were outlined in Vol. III pages 318-322. The new factors that need to be taken into account include the following: (a) The Fifth Plan rate of growth of 5.5 per cent is among others postulated on "the average rate of growth for the Fourth Plan of below 5 per cent against the 5.7 per cent envisaged in the Plan". The mid term appraisal document pointed out that the last three years of the Plan 1971-72 to 1973-74 must register a growth rate of 6.2 per cent if the target of 5.7 per cent is to be attained and concluded that the rate in 1971-72 and 1972-73 is likely to be 5.5 per cent. The data todate, however, indicates that for 1971-72 the rate of growth is 3 per cent and for 1972-73 is zero. The 1971-72 growth trends were reviewed in Vol. II No. 10 pages 55-63. In Vol. III page 237, the forecast of the annual economic review was that 1972-73 growth rate will be a low 1.5 per cent. But with estimate of food production for 1972-73 at 95 million tonnes, which is a 10 per cent decline over the 1971-72 production of 104.7 million tonnes, and a probable 6 per cent growth in industry (the 7.4 per cent rise in the first eight months, vide page 239, fell to 1.5 per cent in January), and 4 per cent in the tertiary sector, the 1972-73 overall growth rate is likely to be zero. This means that even if this year, 1973-74, the growth rate is 5-6 per cent, the secular trend for the Fourth Plan will be 3.5 per cent rather than the 5 per cent assumed in the approach paper (page 25). This will involve a further physical performance that must be provided for in the Plan. A subsidiary problem is the error made in the national income estimate for the base year, 1969-70, of the current Plan. Here again this Bulletin has taken the growth

for that year at 6 per cent (see Vol. II No. 10 page 43), while the economic survey for 1972-73 of the Union Finance Ministry established it at 7.3 per cent, while it was actually 5.3 per cent—giving a difference of Rs. 200 crores in the base year's net national product. This is a fairly simple arithmetical correction but its effects on both the Plan periods must be taken into account. (b) The second problem is the price changes which occurred in 1972-73 and is still continuing in the first quarter of 1973-74. The approach paper was based on 1971-72 prices and everything, the targets, the inputs, the financing of the gross capital formation in the public and private sectors and current development outlays in the public sector and the resources to be mobilised are being recalculated on the basis of the 20 per cent price rise that has taken place since the approach paper was written. In the next section there will be a more detailed analysis of the price behaviour. (c) A third factor which has to be taken into account is the large volume of deficit financing which has characterised the third and fourth year of the Plan. Here again the approach paper assumed that "deficit financing would be kept down to the level at which consequential increase in money supply with the public will not exceed the requirements of the economy arising from real growth terms." The mid term appraisal placed this limit "in the next two years at Rs. 400 crores." In the budget presentation, the 1972-73 deficit was shown at Rs. 550 crores and the 1973-74 budget was anticipated at Rs. 335 crores. In actual fact the deficit for 1971-72 was Rs. 710 crores and the deficit for 1972-73 has been revised by the Finance Ministry to be Rs. 848 crores, which is Rs. 300 crores over the revised figure quoted in the budget, due to unforeseen decline in revenue receipts and food imports. In addition there is the bank credit to Government which stood at Rs. 491 crores, which was the contribution of the banks to Government borrowing and holding of securities. In reassessing the Fifth Plan resource base, the first thing to do is to ensure that this year's deficit financing stays within the budgeted figure and also to plan action to combat inflation and causes of deficit financing. (d) Another element is the income and subsidy factor assumed in the approach paper. Like the mid term appraisal document (page 19), the approach document made no provision for further increase in dearness allowance or pay at the union level or the States or the increasing food subsidy. Now the effects of the recommendations of the Third Pay Commission (see Vol. III pages 322-324 of the Bulletin) and the increasing food subsidies which will be discussed later must be reckoned with. Other elements which need to be taken into account in the current reassessment of the Fifth Plan proposals include (e) the resources to be mobilised by the Centre and the States during the Fifth Plan period, in light of the Sixth Finance Commission decisions which will be known in September. Here the facile assumption that the rise in prices will lead to a rise in tax revenue cannot be sustained and the real position should be worked out in detail. (f) The scope and consistency between estimates of financial and physical magnitudes at micro level must be reworked. There will be some erosion in the physical targets and this must be faced. For this the proposal to phase the Fifth Plan in two parts over time is sound. The first phase during the first two years should be devoted to making current investments more productive, completing projects which have been started and ensuring fuller utilisation of capacity, including expanding them where necessary and ensuring immediate use is possible. The second phase during the last three years of the Plan can then provide for

new projects on which project formulation, engineering drawings and some construction work has been started during the first phase. In this manner the Plan targets will not suffer too much real erosion. (g) The balance of payments and the net aid elements need also to be reassessed. In this connection the negotiation with U.K., Japan, Iraq, the Soviet Union, the Scandinavian countries and the East European countries and Bangla Desh on the Fifth Plan needs for crude, steel, fertilisers, etc. should be taken into account. (h) The minimum needs programme and the public distribution system must also be reexamined in light of all the above factors and current experience in this area. This whole exercise should be conducted within the firm frame of the double Plan objectives of reducing inequalities and achieving self reliance.

Against this background the time has now passed for formulating sectoral programmes as a means of exerting pressure on the Fifth Plan's limited resources. The Rs. 3,000 crores Road Plan formulated by the Council of the Indian Roads and Transport Association is, however, a well phased plan. The main justification for this proposed programme is that the Fourth Plan revenue of Rs. 3,000 crores is likely to increase to Rs. 6,000 crores. It computes that our annual loss in vehicles due to our poor and substandard roads is Rs. 160 crores. The phased roads investment in the Fifth Plan is Rs. 1,820 crores, to which the short-fall in the last two plans and rise in prices and wages should be added, making a total of Rs. 3,300 crores. The Plan is further justified as 62 per cent of the Country's exports (Rs. 864 crores out of Rs. 1,407 crores in 1969-70) were transported by roads. The roads also provide through the vehicle owners and operators an expanding area of self employment. Another sector which has been finalised for the Fifth Plan is tourism for an outlay of Rs. 34.80 crores – mainly for the construction of additional hotel and motel accommodation for various groups of tourists. The programme is in line with that outlined for this State by the State Planning Commission's Task Force (Vol.III page 308 of the Bulletin).

Prices and Continuing Inflation: The official wholesale price index during the week ending June 2, 1973 was higher by 20.5 per cent compared to June 2, 1972. It registered a 3 per cent rise in one month between May 3 and June 2, 1973. This run away inflation has been steady and continues. At March, the 12 month price rise was 14.6 per cent (see Vol. III page 324 of the Bulletin), for the fourth month period, January to April, 1973 the price rise being 4.4 per cent compared to the corresponding period in 1972. The week ending May 5 the price rise was 18.8 per cent. In April the price rise was 17 per cent. Thus the path of price inflation —never before experienced in the Country —can be traced,—March 14.6 per cent, April 17 per cent, May 18.8 per cent and June 20.5 per cent—the base being 1960-61 = 100. The real price rise as felt by the consumer is even higher because the official index from which these figures are derived is based on controlled prices for articles like sugar, vanaspati, cement and food grains which are not available to the consumers at these prices. Some curious consumption twists are reported. In view of the fact that wheat costs Rs. 87 per maund while coarse grains are selling for Rs. 140 to Rs. 150 per maund, farmers who used to use coarse grains for feeding their cattle, now find it more economical to use wheat to feed them on a larger scale than earlier, when the HYV varieties made them both abundant and cheap. Here the Union Government's import of milo of grade II which can be used as cattle feed may release wheat now being fed to cattle.

Milk has gone up by 13 per cent, vanaspati 12 per cent, oranges 7 per cent, jowar and meat 3 per cent. In the week before June 2 food articles rose by 1.6 per cent. Industrial raw materials rose by 1.2 per cent during the week, with only manufactures and intermediate products registering a small decline. The basic reason for this run away price situation is declining agricultural production—the food grains production for 1972-73 was only 95 million tonnes as referred to earlier—and reduced industrial production consequent on the power cut and the vast deficit spending by the Government and consequent increase in money supply. The Reserve Bank raised its voice last month and called for a fiscal policy in tune with the economic realities of the Country—somewhat to the chagrin of the Government. As far as the inflationary effect is concerned, the real deficit spending by Government must lump together what it calls the official deficit of Rs. 848 crores and the Rs. 491 crores of bank contribution, making a total of Rs. 1,339 crores plus the bank credit expansion of Rs. 1,500 crores, involving a 16 per cent increase in money supply during 1972-73. Within this increase there was an unusual shift in the use of money which increased by Rs. 909 crores by 1972-73 compared to Rs. 447 crores in 1971-72 as the accompanying table shows :

(Rs. Crores)

	Busy season		*Variations during the year ended*	*Variations during the year ended*
	1971-72	1972-73	April 28, 1972	April 27, 1973
Currency with the public	+442	+909	424	+734
Deposit money with the public	+353	+349	524	+564
Money supply with the public	+795	+1258	+948	+1298
Time deposits	+314	+454	742	+877
Aggregate monetary supply	1109	+1712	1681	2175
Net bank credit to Govt. sector	+820	+882	1193	1351
Net bank credit to commercial sector	+127	+560	+26	+234
Total bank credit to scheduled commercial Banks	+947	+1442	+1219	+1585
Total deposits	+624	+769	1248	+1447
Borrowing from RBI	+4	+18	—168	+1
Bank credit	+355	+884	518	+917
Credit deposit ratio end of period	71.7	70.3	71.7	70.3

Thus the rate of expansion of money supply, and bank credit to Government and private sector was 20 per cent while the rate of GNP growth was zero per cent. Against this serious inflationary situation one action has been taken. As from June 1, bank rate was raised from 6 to 7 pe cent. In addition, Rs. 190 crores of lend

able funds of the banks have been impounded by the Reserve Bank varying the cash ratio requirements from 3 to 5 per cent and the 39 per cent liquidity ratio. The minimum lending rate on bank advances other than those exempted such as the credit guarantee scheme, exports, primary cooperatives, public sector food procurement, etc. will be 10 per cent. The stage is thus set for reining in the credit expansion and this should be accompanied by bond sales to non-bank investors, and raising interest rates on deposits to increase deposits and decrease cash in the hands of the public. Also action is needed on the side of the Government in response to the appeal of the Governor of RBI for checking unproductive expenditure and eschewing deficit financing. Eschewing may be not possible but its slowing down is an imperative. For this there must be some accounting of the large deficit finances. What happened to the Rs. 150 crores emergency rabi crash programme? Why was the result a decrease in food-grain production? Some cost utilisation instruments should be built into programmes like this, particularly when they are ad hoc crash programmes. Further an immediate cut in non-plan expenditures should be imposed ranging from 5-10 per cent, particularly on administrative costs. Some cuts in plan expenditures particularly those which are not ready and which have not started and a careful allocation of the Rs. 150 crores set aside for advance action should be ensured. FICCI's proposal that the public sector also should be subjected to credit restraints is sound. Government loans for this year should aim at a net borrowing of Rs. 562 crores instead of the Rs. 362 crores assumed in the budget. The food subsidy also needs careful handling, which should be compensated to some extent through savings on handling charges and a rise in issue prices. Finally there is need now for an income-price policy that is outlined in Chapter IX of the Approach Paper to the Fifth Plan. The Third Pay Commission report recommendations are to be put into effect in July and the question of making part of the pay increases as deferred payments through bank credits and pension fund additions raises the whole question of setting up machinery for regulating increases in wages, salaries, dividends, interest and rent, aimed at containing inflation and promoting growth and social justice. Simultaneously a price freeze or at least regulation ensuring no more than the true scarcities that we face in the Country is needed. The time for action is now both to meet the serious situation faced by the people and provide a sound basis for the Fifth Plan start.

Grain takeover and food imports: As on June 19 against the target of 8.1 million tonnes of wheat procurement, the actual procurement was 4.1 million tonnes. Punjab leads with 2.3 million tonnes against the target of 3.4 million tonnes. Here internal consumption is rising, a demand for increase in procurement price both to compensate rising costs and the soaring prices of coarse grains are obstacles. In Haryana 9,00,000 tonnes have been procured against the target of 1.3 million tonnes. Here the rabi crash programme has failed, production has decreased compared to last year by 2.34 lakh tonnes, power shortage and transport bottlenecks hampering distribution of fertilisers are obstacles to procurement. UP has procured 5,00,000 tonnes against the target of 1.8 million tonnes, Madhya Pradesh has procured 1,50,000 tonnes against 6 lakh tonnes, Bihar 60,000 against 4 lakh tonnes, Rajasthan 70,000 tonnes against 3 lakh tonnes and other States 8,000 lakh tonnes against a target of 3 lakh tonnes. To step up procurement a task force headed by the Minister of Heavy Industries recommended a subsidy to farmers in cash and kind—a credit card which

will provide a package of inputs at low cost to farmers who bring wheat to the Central pool from 12 districts in Punjab, 10 in Haryana and 8 in UP. It also recommended a rise in the procurement price of wheat and a cut in the inflated demands of deficit States, so that 8 lakh tonnes instead of 12 lakh tonnes are released every month. Goa, for instance, which is a rice eating area with a population of 8.57 lakhs asks for 7.20 lakh tonnes of wheat. There is a good deal of leakage as the supplied wheat is sold by the consumer to the retailer or the affluent at a profit. The fair price shops should supply wheat only to the vulnerable sections. The recommendations of the task force on the package to the wheat farmers were not adopted. Instead the Union Government has decided to import up to 6.5 million tonnes of food grains since January. It has already purchased 2 million tonnes at a cost of Rs. 380 crores and is now placing orders for a further 2 million tonnes. The logic of this decision is that the buffer stock now stands at 4.4 million tonnes and these are sufficient for 4 months at the rate of 1 million tonnes release per month. The procurement target has been revised to 6 million tonnes and that would provide the additional 2 million tonnes for the 2 months before the kharif harvests come on the market in November. The 2 million tonnes import will be a needed cushion. One interesting interlude was the offer to the Government at the end of May of the food grain trade to procure 3 million tonnes of wheat through its contacts with the farmers, in addition to the Government's procurement which it estimated will not exceed 5 million tonnes. The conference of Chief Ministers at their mid June meeting adopted a bonus scheme to increase wheat procurement in place of the task force recommendations. States which achieve 25 to 50 per cent of the target will receive Rs. 4 per quintal, those who reach 50–75 per cent Rs. 5 per quintal, those who reach 75–100 per cent Rs. 7 per quintal and Rs. 10 if the target is exceeded. If the target of 8.1 million tonnes is reached this bonus scheme will cost the Government Rs. 32 crores, if 5 million tonnes is attained the cost will be Rs. 15 crores. The scheme is of great advantage to the Punjab which does not need it. Its real weakness is that it has not worked out how the bonus will be passed on to the farmers, leaving this issue to the States. The conference also decided to fix the support prices for kharif paddy, which this State had demanded and for other coarse grain cereals. It accepted the recommendations of the Agricultural Prices Commission (APC) except that the conference decided that the procurement price recommended should be the support price—that is they will be the floor below which paddy and coarse grain cereals prices will not be allowed to fall. The Government will then have the freedom to offer a higher price to growers if the market conditions demand it. The support price of paddy and all coarse grains except bajra has been raised from Rs. 51-56.52 per quintal last year to Rs. 63 per quintal. The cost of production to the farmer averages Rs. 50-55 per quintal. For bajra the price is to be Rs. 65 per quintal. There are other decisions to be taken later. No targets have been fixed for paddy and coarse grains procurement which will be decided at a future meeting, on the basis of more precise information on kharif sowings to be collected by the States. Similarly the takeover of the wholesale trade in rice and coarse grains which had been decided in principle was not put into operational terms. It is likely that the details will be worked out more fully and possibly the takeover postponed for a year or until the next rabi season. Further the recommendations of the APC has not been considered for differential prices for kharif cereals sold through fair price shops, which will make

available supplies to the poorer sections at cheaper prices and will also lower the subsidy burden on the Government which at present prices for a monthly distribution of 1.8 million tonnes amounts to Rs. 150 crores. APC has also recommended considerable enlargement of kharif paddy procurement and rationalisation of the cost structure – the hulling/milling ratios and processing and incidental charges – as between the States. On all these, decisions will have to be made at the next meeting of the Chief Ministers which will be held when the current monsoon effects are known. Against this background certain imperatives stand out. First if the Fifth Plan objective of reducing poverty and providing foodgrains to the poverty sector is to be executed, the takeover of all foodgrains is inescapable and will have to be fully but carefully executed. Second the procurement machinery and operations and the distribution system should be strengthened. In earlier issues the problem of retailers and retail system had been highlighted (see Vol. III pages 324-327 and page 405 of the last issue). Now it is clear that the procurement system also needs to be strengthened and this can be done by action by the States. Third the increased procurement prices for wheat given in the form of bonus and paddy and other coarse grains should be passed on to the farmers speedily. Fourth a system of price differentials as between rich and poor should be worked out and operated. Fifth for the coming kharif season, if there is to be no paddy wholesale trade takeover, the levy system should be used to procure paddy to meet the needs of the vulnerable sections. Sixth all efforts should be made by all States to take advantage of the normal monsoon which is setting in, in order to increase kharif production, ensure that fertilisers and seeds distribution is assured and so help achieve the 115 million tonnes target for the current year. The plan is to bring 1 million hectares of additional land under cultivation to ensure a kharif production of 67.7 million tonnes including 41.3 million tonnes of rice—which is a mere 4.7 million tonnes increase over the first three years production of the current Plan. This increase will include an increase of 2.3 million tonnes of rice, one million tonnes each of jowar and bajra and 4 lakh tonnes of kharif pulses and calls for use of HYV suited to each soil region, careful and balanced use of 1.66 million tonnes of fertilisers and plant protection measures and the provision of Rs. 12.79 crores of credit to the farmer. This can be achieved and even so it will be lower than 129 million tonnes of food grain targeted for the last year of the Fourth Plan. Equally the next rabi season's production must now be planned at 47 million tonnes – 30 million tonnes of wheat, 3.7 million tonnes of rice, 3 million tonnes of jowar, 5.3 million tonnes of gram and 5 million tonnes of other crops. It is through such long range precise planning that the current year's lowered target of 115 million tonnes can be achieved and the Fifth Plan prospects made realisable.

National Production Front

Sugar: The production side of sugar for the year 1972-73 is good, compared to last year's 31.13 lakh tonnes, as by the end of June this year the output is 37.5 lakh tonnes and will amount to 39 lakh tonnes for the year 1972-73 on the basis of a 5.3 per cent increase in sugarcane acreage (from 23.057 lakh hectares in 1971-72 to 24.272 hectares in 1972-73). The increases have come mainly from UP, Punjab and Maharashtra due to favourable weather conditions, the Government's liberal policy in allowing excise duty rebates, the higher cane prices paid by the factories and the extension services rendered by some of

them. On this basis the production for the year 1973-74 is expected to be 42-45 lakh tonnes as pointed out in the last issue of the Bulletin (page 408). The price in the open market still rules at Rs. 4 per kg. for the reasons outlined in the last issue plus the sugar stocks still being around 44 lakh tonnes. In 1971-72 the carry over was 14 lakh tonnes and with the production of 31 lakh tonnes, the total availability was 45 lakh tonnes. 1972-73 opened with a stock of 5.8 lakh tonnes and with the production of 39 lakh tonnes, the supply was 44.8 lakh tonnes. It is hoped that in 1973–74 with a stock of 8.6 lakh tonnes and a production of at least 42 lakh tonnes, the total supply will be 50 lakh tonnes. These prospects should not only lower the price but increase the export quota as requested by Government at the UN Sugar Conference in Geneva in May. The longer term issues relate to the expansion of existing units and the development of new units so that the Fifth Plan target of 50 lakh tonnes is attained. These considerations plus the political factors need to be taken into account in the Government's decision on the somewhat unhelpful report of the (Bhargava) Sugar Enquiry Committee to which reference was made in the last issue. Four members of the Committee including the chairman oppose nationalisation of the industry on the grounds that the industry is working well, and that a National Sugar Authority to take over and run sick mills and a Marketing Board to buy the entire produce from the factories and market it equitably and efficiently would be enough. One member while agreeing with this, recommends that in the meanwhile managerial capacity should be built up in the public sector and when this is done the industry should be nationalised. 5 members of the Board, on the other hand, recommend nationalisation because the mill owners are concerned only with their profits, that they have a large back log of arrears to the growers and the consumers interests are completely neglected. It is likely that the Government will come to a decision on this matter at the July session of the Lok Sabha and it seems likely that for the present the nationalisation issue will be deferred. If that happens, then the recommendation of the committee for a Government Marketing Board to take over the entire purchase and distribution of sugar should be immediately put into effect.

Government undertakings performance : Further to the report of the Bureau of Public Enterprises on 8 firms commented on in the last issue of the Bulletin (page 405), the 1971-72 report presented to the Lok Sabha on 101 industrial and commercial Union Government undertakings makes equally dismal reading. With a total investment of Rs. 5,052 crores, 93 of these units incurred a net loss of Rs. 18.96 crores compared to the previous year's loss of Rs. 2.86 crores. This rising trend of losses is disturbing. HSL with an investment of Rs. 1,038 crores incurred the largest loss of Rs. 45.63 crores and 22 other concerns lost Rs. 62.99 crores. On the other hand 26 companies made a profit of Rs. 26.89 crores, and 13 commercial companies a profit of Rs. 10.97 crores. The need to improve managerial resources, ensure fuller capacity utilisation and make project and programme planning in the units realistic is once more underlined. In this context the programme outlined by the Minister of Heavy Industries and accepted by the 17 public sector undertakings under his ministry is a step in the right direction. Sound management enabled BHEL once more to record a profit of Rs. 8.3 crores for 1972-73 and even HEIL the chronic loser under the same management for the first time, showed a profit of Rs. 5.1 crores. Plans were established to aim at a 10 per cent return on the capital employed through the ministry acting as a

data bank for better inventory control so that inventories and fabrication facilities can be spread evenly among the units spreading their production over the 12 months and not concentrating everything in the last 3 months which also provokes labour unrest. The problems the units face in not being able to obtain the steel they need or sophisticated equipment from HEC are to be identified and dealt with. The committee that has been set up by the ministry to evaluate the public sector undertakings, decide on ancillaries needed to use the capacity of each unit, and help each unit to use to the full its facilities and capacity should for next year eliminate the losses suffered for 1972–73 of this group, amounting to Rs. 55 crores.

Steel: With the exception of IISCO, all steel plants continued to record a decline in production in the months of May and June continuing the trend reported in the last issue of the Bulletin (page 406). This decline was due to the serious shortage of coking coal and to the power cut. IISCO's May output of pig iron was 60,424 tonnes against 57,502 tonnes in May 1972, ingot steel was 42,084 tonnes against 33,495 a year ago. Saleable steel, however, dropped from 27,160 tonnes to 21,623 tonnes because the rolling mills could work only for 50 per cent of their scheduled period due to the sharp fall in power supply from DVC. The commissioning of the second coke oven battery was postponed as Bharat Coking Coal, itself suffering from power shortage, was not able to begin regular supplies to Bokaro's second coke oven battery. In Bhilai more than 40 out of 300 coke ovens had to be closed down and the poor quality coal supplied is damaging its coke ovens and blast furnaces which will take many months to set right. At Rourkela the rolling mills and the tandem unit had to be constantly shut down because of low frequency supplies and led in the first 2 weeks of May to a loss of 15,000 tonnes of finished steel. Durgapur suffered a production loss of Rs. 4.58 crores in May and had an accumulation of 1,00,000 of steel ingots. TISCO because of the reduction in power lost 30,000 tonnes in April and for 1972-73, 37,000 tonnes of ingot steel and 23,000 tonnes of saleable steel, involving a total loss of Rs. 5 crores. There are two morals to be drawn from this sad story. First all the production targets set for last year and this year have now been seriously affected and the HSL units will once more be in red. This raises the question of what our Fifth Plan steel targets should be. Is it realistic to set it at 9.4 million tonnes of mild steel as is done in the approach paper or the 19 million tonnes forecast in the perspective plan (see Vol. III pages 244 and 329 of the Bulletin) Our demand for steel will continue to rise which apart from the estimates that have been made (see Vol. II No. 9 page 10 and No. 12 page 12) is inevitable given our very low 10 kg per capita consumption compared to the world 150 kg. per capita consumption. Our annual imports are averaging 1.5 million tonnes as indicated in the last issue, involving an import bill of Rs. 350 crores Vol. III page 329). Now the question that is posed, unlike the question posed in every past issue of the Bulletin, is that given the tight resources position of the Fifth Plan and the emphasis on completing projects and working up to capacity, the extent to which we should scale down the steel target and continue to rely on imports This is not really a counsel of despair as much as a choice between two negatives—investments which are not producing and expending our foreign exchange resources on imports. With the latter, we can improve our export performance and pay part of the import bill. To some extent this scaling down of the steel target has been anticipated in the recommendation of the Bhilai expansion study team which

has been approved by SAIL at the end of June and is awaiting the decision of the Union Government. And that is to increase Bhilai's capacity by 1.5 million tonnes to a total of 4 million tonnes and not by 3 million tonnes to 7 million tonnes, as forecast in Vol. III page 329 of the Bulletin. This recommendation is based on sevêral factors. First the cost factor—while the present 2.5 million tonnes capacity at Bhilai cost Rs. 412 crores, of which Rs. 171 crores were in foreign exchange, the 1.5 million tonnes expansion will cost Rs. 300 crores. Second our plant equipment constraints which involve importing the equipment for the Bhilai expansion from Soviet Union. Not only does ordering the equipment from HEC and others involve long delivery delays, their costs are more than double the cost of imported equipment. While Soviet equipment has gone up from Rs. 5,500 per tonne in the first Bhilai stage to Rs. 6,000 per tonne now, HEC equipment which was supplied in 1966 to Bokaro at Rs. 7,000 per tonne and Rs. 13,000 per tonne in 1971 is now being quoted at Rs. 20,000 per tonne for the Vishakpatnam plant. Third the construction constraint—the 1.5 million tonnes expansion at Bhilai can be done within the present parameters of the plant, while a 3 million tonnes will involve construction of a new mirror plant, which is against the phasing philosophy proposed for the Fifth Plan. Finally this kind of phased expansion for the most efficient of the HSL plants at a total cost of Rs. 700 crores (compared to Bokaro's 4.7 million tonnes at Rs. 1,400 crores, the 2 million tonnes TISCO expansion at Rs. 600 crores and the Vishakapatnam and Vijayanagram 2 million tonnes each at Rs. 800 crores), has lessons for other expansion plans which should be speedily examined and accepted. Second there is something radically wrong with our coking coal supply situation. When any expansion of a steel plant is planned, its coal supply shoul first be assured and not simply arranged by diverting existing scarce supplies from the existing plants to a new or expanded unit. Now as we are planning the various stages for expansion of Bokaro, Bhilai, TISCO, etc. the first need is to develop new coal resources before the plans are approved.

Coal: Against this record, the over enthusiastic report of the Department of Mines about the record level of coal production in 1972-73 must be received with reserve. It reports that coal production was 76.4 million tonnes and supplies 82 million tonnes and that the production target for the current year is 80 million tonnes. This increase was largely due to the demand for coal by the thermal plants who had to work overtime and be expanded in view of the slow down of the hydel stations caused by the failure of the monsoons, But its claim that the coal supply arrived in time to the stations and that stations were not living on a hand to mouth basis is not true. The experience of Ennore and Basin Bridge in this State testifies to the unreliability and the erratic nature of coal supplies to the stations. Equally serious the coal supplied was of inferior quality and damaged the generators as they did the steel plants. With the setting up of the Coal Mines Authority, it is hoped that there will be a plan for opening new mines, for effective functioning of existing 214 coking and 711 non-coking mines—all of which have been nationalised, some standardisation of their quality and relation of the various qualities to their varying demand and a minimum of coordination between the mines, their dumps, the demands of steel, thermal, cement, brick kilns and railways and their distribution through our shipping and railway resources. Without all this our Fifth Plan target of 143 million tonnes of coal will remain a paper target.

Fertilisers: To meet the fertilisers shortage in the country, the Government has permitted existing fertiliser plants to expand rapidly, in addition to finalising the setting up of six new plants with the help of Toyo Engineering Company. So far decisions have been made about three plants—one is to be in Paradeep, the second in UP and the third in Mathura. FACT has formulated a two part project for the location of one of the remaining three units at Cochin, using imported fuel oil. One part of the project will produce 900 tonnes of ammonia per day with corresponding quantities of urea and phosphate fertilisers. The other will produce 1,200 tonnes of complex fertilisers per day at a total cost of Rs. 180 crores. Meanwhile the first task of FACT is to set right the existing plant which has an accumulated loss of Rs. 7.48 crores. The plant is working to 60 per cent of capacity and here some modernisation of the plant, installing integrated equipment and some improved industrial relations will put the plant back on a normal basis. The case for locating at least 2 of the fertiliser plants to meet the growing and unmet fertiliser needs of the farmers in the southern States is strong. The Country, in the meanwhile, imports over 2 million tonnes of fertilisers and the prospect of importing the ammonium nitro-phosphate in bulk instead of in bags is now a reality. This fertiliser is not so susceptible to humidity and change of temperature and the 1.1 million tonnes that are imported if done in bulk will save around $14 million in foreign exchange. The May arrival of 200 tonnes of ammonium nitro phosphate in bulk in Kandla has paved the way for the rest of the 2,60,000 tonnes to be imported in bulk, saving Rs. 1.12 crores in foreign exchange. For this Madras and Vizag harbours must be equipped to handle and unload the fertilisers. The other fertiliser that is imported—calcium ammonium nitrate—gives rise to problems of reaction to climate and humidity and till these are solved cannot be imported in bulk. The need for imports should end by the end of the Fifth Plan and till economy in imports is called for.

Petrol: Petroleum products and supplies—high speed diesel, light diesel and kerosene—will flow smoothly during the year. The Government has contracted with Saudi Arabia for the supply of 3.3 million tonnes of crude between June 1973-December 1975 (rom Saudi Arabia's share of oil production under the latest OPEC agreement), involving the supply of one million tonnes of crude in 1973 and 3/4 million tonnes of crude from Iraq out of the 2 million tonnes additional to the 112 million tonnes it is to supply from 1976. This entire addition is being given to the 2 western oil companies—Burmah Shell, Esso and Caltex—to be processed using their idle capacity and marketing the produce through IOC. The foreign companies which had a licensed capacity of 5.075 million tonnes expanded their capacity to 7.83 million tonnes without proper authorisation. This has been regularised now and they are being given a process fee for processing the crude. This also settles the Government's discussion and battle with the companies over the price of crude referred to in Vol. III pages 175 and 246 of the Bulletin. Here the Government has had to give in because the OPEC countries have a sellers market and have steadily raised the prices—in 1969 it was $1.28 per barrel, in April 1973 it was $2.225 a barrel and by 1980 it is expected to go up to $5 per barrel. Whatever the price charged by them, there are buyers. One small producing country has demanded $2.64 per barrel, which has been accepted by consuming units in Brazil, Switzerland, US and Europe. India has not been successful in getting lower prices from Saudi Arabia, or Iraq or Iran. Thus the prices claimed by Burmah Shell is $2 25

per barrel, Esso $2.087 and Caltex $2.25. Indian public sector refineries are paying similar amounts—Madras refineries have been asked by Iran for $2.21 per barrel and Iraq and Saudi Arabian prices are the same. Hence the Government has in effect had to accept the price rise. Only in the case of Iraq the price rise will be compensated by the balanced overall trade agreements between the two countries. For the present, petroleum supplies are assured, with rising prices for the Country. The future is serious. By the end of the Fifth Plan, the Country's crude requirements will be 42 million tonnes, of which 30 million tonnes will have to be imported at a cost of $1,50,000 million. One of our problems is that we do not have a demand clout compared to the US which will by then be importing 4,720 million barrels per annum and Japan's 200 million tonnes per annum. Under these conditions we need to intensify, in a sane and rational manner, oil exploration—both inshore and offshore. For this purpose the Government is planning to make Oil India a wholly State owned enterprise, (at present it has 50 per cent partnership with Burmah Oil Company of UK as pointed out in Vol. III page 330 of the Bulletin). The Government intends to buy up the Rs. 14 crores of shares of Burmah Shell in Oil India in order that (a) its crude production which is now limited to 3 million tonnes per annum should be increased to 8 million tonnes and (b) it may expand its exploration operations. Such explorations within the land mass of the Country, offshore notably the Bombay high project, and the limited concessions in Iran and Iraq can provide to some extent for our future needs. The limits are the absence of sizeable deposits in the Country and the very high cost of exploration. But the potential resources should be identified and used. The Government also is planning to expand the total crude processing capacity in the Country which is today 20 million tonnes. Cochin is to be expanded from 2.5 million tonnes to 3.3 million tonnes, Madras from 2.5 million tonnes to 2.8 million tonnes, Haldia from 2.5 million tonnes to 5.5 million tonnes, Mathura's proposed 6 million tonnes and 3 million tonnes at Koyali. In Bengalgaon amilli on tonne plant is under construction and a plant in Goa is under study. With these expansions, the Country's petroleum product needs for the Fifth and Sixth Plans will be met.

Coarse cloth : The production and retailing of coarse cloth is a critical part of the current and Fifth Plan programmes to make available this part of the poverty sector's need. As a result of the power cut, cloth production in the Country has been on the decline. While the Gujarat and Maharashtra mills have maintained production with their generators, the southern mills have averaged only 35 per cent of their normal production. The price of indigenous cloth has consequently risen and there has been a steep decline in the output of coarse and medium varieties of cloth which are used by the weaker sections of society. The first task, therefore, is to ensure that mills maintain the existing level of production of 400 square million metres per annum and do not switch over to superior varieties. The next stage is to double the output to 800 square million metres so that by the end of the Fifth Plan the production is 1,200 square million metres. Parallelly this cloth should be distributed through cooperatives, fair price shops and licensed retailers at reasonable prices so that it reaches the poor man.

Cement: Further to the shortage in cement supplies referred to in the last issue of the Bulletin (page 407), the Union Government has reorganised cement distribution and imposed stricter distribution controls, to which further reference wil

be made under the State-Industry section. The power shortage has effected cement production in all States except Madhya Pradesh and Bihar, the loss of production being 2-3 lakh tonnes per month. It is unlikely that the current year's production will attain 15 million tonnes, while the demand is soaring. The Government which used 5.24 million tonnes in 1970, requires for this year 9 million tonnes which could be 60-65 per cent of the total production. The Union Government departments are being allocated 2 million tonnes, and the States 13 million tonnes, on the assumption that 15 millions will be available. Of the State supply, 60 per cent are allocated to Government undertakings 10 per cent to those of semi-governments and 30 per cent to the public. All States have been asked to regulate distribution under the provisions of the Essential Commodities Act. These regulations include reorganisation of 400 KM marketing zones for each factory, and the issue of authorisations to match supplies on the basis of quarterly requirements submitted by each State for distribution to its departments, industries and public distribution. The total authorisations issued by the cement controller will be equal to the State's allotment. In this context of scarcity, the Government departments should cut back on their building programme—a desirable development that should also be carried into the Fifth Plan.

Shipping: Against the target of 4 million tonnes for the Fourth Plan, 4.4 million tonnes have been achieved, though the operating tonnage will be 3.167 GRT against the target of 3.5 GRT. This is a good performance but against the fact that world tonnage is 268.3 million and our seaborne trade is 2 per cent of the world total, we need to improve our less than 1 per cent of the world tonnage and the 10 per cent of our own foreign trade carried by our ships. Domestic ship building has only started with the Vishakapatnam shipyard producing 4 ships a year and Cochin starting in 1964 with its first 85,000 tonnes ship. This needs to be expanded as buying ships from outside is becoming increasingly difficult and scarce. Another area where immediate action should be taken is in coastal shipping which is vital for transport of coal, cement, salt and other bulk commodities. Here there is no excuse for the practice of chartering foreign vessels; there should be annual addition of 20,000 GRT at least to meet our needs.

Industrial promotion: The Union Government is planning to simplify, improve and streamline industrial licensing procedures with a view to promoting greater selectivity in the licenses issued, avoid infructuous licensing and set up capacity in an orderly and planned manner. Above all it is hoped that it will lead to expeditious and speedy decisions to meet the present industrial potential of the country. One of the suggestions made by the chairman of ICICI to improve the performance of public undertakings and to mop up the excess funds in the stock markets is for equity participation of the public in public sector undertakings, up to 20-30 per cent of the capital. This is an old suggestion and can be examined favourably provided it can assure the real participation of small and medium shareholders. Another such proposal is that of the National Productivity Council to offer a package of consultancy services to the 2,00,000 new small units which are planned to come into being in the Fifth Plan. These services can be of real help if they carried out market surveys for identifying effective investment opportunity and techno-economic feasibility studies for new entrepreneurs and helped to implement the result of these studies.

Agriculture : The sugarcane price for the next season commencing in October will be the same as last year—the minimum price of Rs. 8 per quintal linked to a recovery of 8.5 per cent with a premium of 9.4 paise for every 0.1 per cent in recovery (see Vol. II No. 8 page 9 and No. 9 page 24). The 1973-74 season starts with a cane stock of 8.6 lakh tonnes against 5,80,000 tonnes last year. The Country's agricultural performance has been reviewed in the wheat takeover section. The kind of procedural constraints faced is brought out in an Andhra Pradesh account of a scheme which in face of the power cut planned used lift irrigation to benefit 360 acres at a cost of Rs. 36,000. This scheme under the emergency rabi programme was rejected because that programme provided only for energising pumpsets and if the scheme had been accepted, the shortfall in achieving the target for energising pumpsets would have been 60. To irrigate 360 acres, 60 pumpsets would have to be energised at a cost of Rs. 2,00,000 and that was what the emergency rabi programme funds was allotted for and spent, And on top of all this there was no power available. The objective, to increase food production was lost sight of. It is hoped that this kind of constraint will be removed in the new directive from the Union Government to the States to streamline procedures for water management in command areas for major and minor irrigation projects so that agricultural production can be increased. The constraints in the command areas which represent 50 per cent of the Country's irrigation potential include (a) lack of proper delivery of water, (b) absence of drainage, (c) lack of extension and communication facilities and markets, and (d) limited supply of inputs, fertilisers, pesticide, machinery, etc. In fact the problem of proper crop protection has assumed major significance. Our average rice yield has over half a century increased by 1.7 per cent (from 1,058 kg/ha in 1897 to 1,074 kg/ha in 1973, due mainly to lack of plant protection- All our HYVs and breakthroughs are lost through insects and pests. With adequate pest control, increases have been registered of 40 per cent in rice, 130 per cent in jowar, 31 per cent in maize, 41 per cent in gram and 300 per cent in mustard. Pesitcides have a good cost-benefit ratio. I kg of pesticide gives 1 to 2 additional quintals of yield. But widespread use of pesticlde is costly at Rs. 800 crores for the whole Country, and can raise problems of pollution and ecological imbalance. Hence on integrated use of pest control which relies on chemical and organic instruments must be devised and that is the first task of our agricultural and biological R & D system. Another input is the farm equipment service which is being provided by 502 agro-service centres in the form of tractors and other farm equipment which are hired out to farmers. These centres which are to be increased to 9,000 during this year and the Fifth Plan should be provided each with 2 tractors with priority to them of Indian made tractors and through reducing duty on imported tractors (see Vol. III pages 245 and 331). These centres should also be developed to provide the farmer with fertilisers, pesticides and diesel oil and other agro-chemicals so that the small and medium farmer can step up his production. The most urgent need of the farmer is credit. Here the picture is a mixed one. On the one hand the RBI reports that as of 31 March 1973 the nationalised banks disbursed Rs. 2 crores as credit to the small farmers and other vulnerable sections of the society under the differential interest scheme (see Vol. I No.7 page 7 and Vol. II No. 5 page 6). Farmers with 1 acre of irrigated and 2.5 acres of dry land are allowed to borrow up to Rs. 1,500 for working capital and Rs. 5,000 for

term loans. Till the end of March 1973 the scheme was operated by 2,170 bank offices or one out of every six branches and is to be extended to all 265 backward districts in the Country. On the other hand the momentum of the scheme in rural areas has slowed down. The 14 nationalised banks added 762 rural branches in the first year after the takeover, 675 in the second year and 332 in the third year. And what is worse the credit has gone largely to large farmers. At the end of December 1971, of the total nationalised bank advances of Rs. 2,812.72 crores, Rs. 136.8 crores was to farmers and within that only Rs. 30.8 crores to farmers with holdings below 2 hectares. That is, only 1.1 per cent of the total loans went to small farmers. Farmers with above 2 hectares holding received Rs. 106 crores on credit or 77.4 per cent of the farm credit and 3.8 per cent of total advances. One reason for the neglect of the small farmer is the slow down in rural branches expansion and the complex procedures including guarantees required of the small farmer. From this point of the decision of the RBI and the banks to launch a network of farmers services cooperatives to provide the small farmer with credit and a package of services is timely. The aim of this scheme is to achieve the target of lending Rs. 2,000 crores to farmers and secure 10 million borrowing accounts from them by 1978-1979. 38 pilot farmers cooperatives have been started to provide the farmer with short term, medium term and long term credit as well as supply them with consumer goods and purchase and sale of their product. Each society has started with a capital of Rs. 50,000 provided by the State Government, the borrowing members contributing 5 per cent of their loan and banks a nominal amount. Each society covers 10 to 12 villages with a population of 10,000 with small farmers being the majority in the board of management. The bank identifies the area where the society is set up, helps the setting up of the society, and its running and provides finance of Rs. 10 lakhs at least in 3 years. This is one more institution created to help the small farmer and it is hoped that it will be more successful than others referred to in Vol. II No. 2 pages 6 and 7, No. 9 pages 11, 12, 20 and 21). Now the major priority is the increase in kharif sowing of rice, maize, jowar, bajra, pulses and oilseeds. To this all efforts, those of the farmer, the banks, the cooperatives and the Government should be turned.

Exports : For 1972-73 the export trend referred to in the last issue of the Bulletin (page 409) enabled the Country to pass the Rs. 1,850 crores mark, exceeding that year's target of Rs. 1,760 crores. For the current year a small increase is proposed in the target to Rs. 1,900 crores which would mean that the Fourth Plan will end with an annual average increase of 7 per cent. Looking at the development needs of the Country for the future, the Government proposes an annual increase of 20 per cent in our exports, so that by 1980 the export earnings will have increased four fold to Rs. 8,000 crores. The need for such an accomplishment (achieved by Japan in the sixties) is clear. The current marginal surplus of our exports over our imports must be sizeably increased for several reasons referred to earlier. (a) During the Fifth Plan we will have to import annually large amounts of steel, fertilisers (referred to earlier) and power generating equipment. The committee on indigenous plant and equipment has after taking into account the total capacity of indigenous manufactures recommended the import of thermal and hydel equipment up to 10,000 MW capacity to meet our needs till the start of the Sixth Plan. The committee has gone on the basis of additional power requirements for the Fifth Plan of 21.2 million KW (consisting of 8.2 million KW hydel, 13 million

KW thermal and 0.7 million KW nuclear) recommended by the Sixth Conference of State Power Ministers *and not the scaled down estimate of 14 million* KW of the Planning Commission earlier referred to. On this basis it recommends import of 3,000 MW of 200 MW each *for the Fifth Plan and thermal generators of* 500 MW units for a total of 5,000 MW for the early *years of the Sixth Plan. Similar suggestions* have been made by the Railway Board *which confronted with an increase in* freight traffic from the current 200 million *tonnes* to 300 million tonnes by the end of the Fifth Plan and assuming *optimum production* at Chittaranjan and Varanasi locomotive works, has under *consideration importing* 100 diesel locomotives *during* the Fifth *Plan* at a *cost* of Rs. 35 crores. Further during the next five *years we* should assume one bad monsoon year which will involve importing *some cereals and edible* oils and raw *cotton*. These increasing imports will have to be *serviced* by our export earnings. (b) Though there will be a reduction in non-essential imports *and in so far as* the programme to concentrate on production of essential goods will reduce imports because their *import component* is small, there will have to be imports to match and spur our export *oriented industries, thus calling* for import of raw materials, machinery and equipment to these industries. One reason why our trade with Africa is unfavourable (Rs.)9.81 crores of exports and Rs. 82.33 crores)f *imports in 1971-72) is that it is a major ource of* importing industrial raw materials or our export *industries which need* opper, zinc, lead raw cashew and idustrial diamonds. (c) Third our export rnings are the *only source* for sercing our large and growing foreign debt hich today stands at Rs. 10,279.57 crores volving servicing obligations of around . 600 crores (see last issue of the Bullepage 409). *(d) Finally* the Fifth Plan jective of self reliance and zero net aid by the *end of the* Plan period calls for th kind of target proposed by the *Government. This means* increasing our non traditional exports and stepping up th *work of the Trade Development Authorit* which is a small export of Rs. 30 crore for 1972-73 and a small Rs. 52 crores for this year. The *demand* of Western Europe, US and Canada for electronic products, *engineering goods, fencing* components, bicycles, bicycle chains, ready-made garments, home furnishings and industrial fasteners *can be quickly* stepped up if the export *industries* are *helped* by streamlining and *simplifying licensing procedures* for the issue of new or expansion licenses and providing *them* with raw materials at *international prices*, expediting the importing of technology, *balancing equipment* and *special filament parts*, and the *needed* infrastructure. Turnkey *projects* which the IDBI can now assist should be given special *assistance*. The recent visits *of export* teams to *Europe, Canada and* South America have *shown the large* export prospects there are if our firms will speed up delivery and *provide* servicing and in South America *warehousing* facilities. The joint *ventures in South America* in refrigeration, air conditioning equipment and bicycles and their demand for engineering goods, *textiles* and sugar machinery as well as the doublings of our chemical exports to Europe *now standing* at a small Rs. 7 crores a year are *possible*, if there is a continued effort on the part of the trade and the facilitating action by the *Government*. In any case the *Country has no alternative except* to boost its exports if the Plan objectives are to be realised. The traditional *exports*, tea, coffee, cotton textiles, leather manufactures, cashew kernels and *marine exports and to some* extent sugar and rubber should also be kept up, though with inelastic world demand and growing supplies from *Africa* and other Asian countries, this will be a declining part of

our export earnings. In this connection the insistence of the rubber producers to export 10,000 tonnes in order to relieve the industry of surplus stocks should be settled soon (see Vol. III page 335), though the opportunity cost analysis made by the Board that it would reduce the Government expenditure on stock piling by Rs. 160 per tonne is open to question. The major issue in the export area is the trade agreement with EEC which is still awaiting finalisation as far as a first agreement on jute is concerned. The principles for an Indo-EEC agreement as established were summarised in Vol. III pages 335–336 of the Bulletin. After protracted negotiations, a first limited agreement on jute was arrived at the end of May by the officials on the two sides. On carpet backing, the EEC duty will be cut by 20 per cent on 1 July 1973, a second 20 per cent on 1 July 1974 and a further 10 per cent from 1 January 1975. On hessian and sacking there will be a 20 per cent reduction from 1 July 1973, a second instalment reduction of 20 per cent from 1 January 1974 and the remaining 20 per cent from 1 January 1974. There is to be no quota restriction on import of hessian and sackings but one on carpet backing. The agreement is fcr a 5 year period. But even this small and limited agreement has not been ratified as at the end of June because the Governments of France and Italy had not accepted the proposals. India is of course much more interested in what UK will do from 1 January 1974 as India's jute and coir exports to UK are about double of that to all the other members of the Common Market and exports to UK face no tariff duties. India's exports of jute and coir to the UK are Rs. 7 crores and Rs. 2.5 crores per annum, while for the rest of the common market they are only Rs. 3 crores and 1.5 crores. On coir, negotiations are continuing with India requesting a similar reduction on coir tariffs and no quota restrictions. Our stakes in these negotiations are high in relation to the Country's development plans. The enlarged European community has a market of 253 million people, a GNP of $692 billions, with the world's largest annual imports of $64 billions (compared to US imports of $44 billions). If India can contribute a small part to this huge import market, it will make a sizeable difference to our export earnings as against our current unfavourable annual trade balance with the Community of $150 million We can supply the Community with many goods it needs—traditionals like pepper, tea, coir mats, canned prawns, handicrafts and handloom products as well as light engineering and chemical goods in all of which we have a comparative advantage. But the red tape and delivery delays in our exports are discouraging the import houses in the market and we need to produce and deliver at a quicker rate to strengthen the hands of the Government negotiators.

Aid: The mid June meeting in Paris of the Aid India Consortium pledged for this year, the last year of the Country's Fourth Plan, $1,120 million (Rs. 818 crores) in aid including $160 millions in debt relief. The total foreign debt of the Country as at 31 March 1973 is: Rs. 11,887.15 crores in signed agreements; Rs. 10,279.57 crores used so far; Rs. 6,006.16 crores repayable in foreign currency; Rs. 391.44 crores repayable in exports to East European countries; Rs. 1,738.59 crores repayable in Rupees. Within the pledge for 1973-74, project aid will be $500 millions and non-project aid will be $700 millions. This means that for the current year as against a total aid disbursements of $980 millions which takes into account aid in the pipe line and agreements that will be signed this year, repayments obligations including those to East European countries amount to $720 million, leaving a net aid of $260 millions which is Rs. 195 crores which should be seen in the perspective of this

year's plan outlay of Rs. 4,364 crores. These figures do not include US aid pledges which were not made at the Paris meeting. In addition to its willingness to participate in debt relief, the US aid appropriations this year provides $76.5 millions for economic assistance to India, which if approved by the Congress, will have to be negotiated in detail. In the Paris meeting there was appreciation of India's export performance and understanding of the difficulties caused by the drought. The report presented by the World Bank calling for an aid pledge of $1.2 million was based on $197 millions being spent on foograin imports. At the time the World Bank drafted its report (in January 1973) this was right but the meeting noted the larger food imports now planned (increasing from 2 million tonnes to 4 million tonnes) and promised to give consideration to increasing their aid pledges. Increased pledges were made by West Germany, France, Belgium and Japan. The pledges are all in devalued dollars There was also some discussion of India's industrial policy as clarified in February (see Vol. III pages 240-241), which is the kind of issue which throws doubts on aid intentions and justifies the Fifth Plan decision to work to zero net aid by the end of the plan period—which is the direction in which we are moving. The other issue for which the time is now ripe for settlement is the PL 480 funds which India owes to the US. The total today of the funds with the RBI are Rs. 59 crores in convertible currency and Rs. 623.87 crores in Rupee funds as pointed out in the last issue of the Bulletin page 410), which unless settled will increase to Rs. 2,000 crores by the end of the century. The Indian position is to write off the Rupee funds except for an agreed percentage which can be used by the US for mutually agreed purposes. The US position seems to be that an agreed percentage should be set apart for financing cultural exchanges, scholarships and travel grants and the rest should be shown in the Country's annual budget estimates as US development grants. What is now needed is an early agreement probably in between the two positions to liquidate this irritant in the economic and political relations between the two countries. There could be a general agreement on treating the writing off process as US contribution to Indian development expenditure without highlighting it in the annual budget estimates. Equally the earmarking of a certain amount in accordance with the original PL 480 agreement for use by US for sponsored programmes to be mutually agreed by the two Governments can be accepted. In mid May IDA made a loan of $55 millions to improve Bombay's water supply and sewage system in order to avoid deterioration of the public health facilities and promote the development of the 6 million people. In mid June it announced a further aid of $100 million for the foreign exchange needs of 700 medium and small industries. The World Bank also in early June loaned $70 million to ICICI which will enable it to provide part of the foreign exchange needed by industry for which it needs $112 million by 1975. The past World Bank loans of 285 million was used to meet the foreign exchange needs of chemicals, ferrous metal products, electrical equipment and engineering goods industries and helped to create 3,00,000 jobs. As part of its consortium pledge, Sweden signed in mid June an agreement to provide India with Rs. 27.21 crores as development aid during 1973-74 and 1975-76. In mid May the UK signed an agreement for a soft loan of Rs. 26.56 crores to finance the import of capital items by some public and private sector firms and for the financing activities of IFCI and ICICI. In reverse during the 3 year period ending 31 March, 1973 India extended Rs. 222 crores aid, mainly in grants to Bangla Desh, Nepal, Sri Lanka,

Afghanistan and Bhutan for various agricultural and industrial development programmes including the setting up of industrial estates, machine industries and fertiliser plants. During the Fifth Plan this level of assistance is planned to be doubled.

International :

Bangla Desh : In early June there was an Indo-Bangla Desh review of the Rs. 25 crores limited payments agreement which was extended till June 27 (see Vol. III pages 337 and 338 and pages 411 and 412 of the last issue) and whose working resulted in an unbalanced situation, with India exporting to Bangla Desh Rs. 18.5 crores and importing from it Rs. 14.5 crores. The accepted contracts are Rs. 22.8 crores from India and Rs. 21.1 crores from Bangla Desh. The agreement is not working, is exacerbating the trade relations between the 2 countries, has led to supply of poor quality goods in some cases by Indian traders and is being used to create a feeling of Indian exploitation of Bangla Desh. Under these conditions instead of going on with this questionable agreement and negotiating for more textiles, cement, coal and yarn which Bangla Desh wants and more raw jute and fish and newsprint which India wants and which the two Governments hope to execute by extending the agreement for a further 3 months September 27, it is really preferable to end the present agreement and establish trade relations with Bangla Desh on normal bilateral relations—giving it grants and soft loans in accordance with its urgent needs. The precedent of terminating the equally unsatisfactory border agreement might be followed in this case. Meanwhile the two governments have taken the first step in this direction by establishing the trade between the two countries on a State to State basis, removing private traders who have been used for exacerbating the relations between the two countries. Now a further step should be taken to climb down the inter-State trade target to around Rs. 17-18 crores per year—if there must be a target, meet Bangla Desh's industrialisation needs and allow Bangla Desh to export to India the surpluses it can generate in the way of raw materials and edibles, now that its internal economy is returning to normal. A further move in this direction is the agreement of Indian Railways to increase its coal supplies to Bangla Desh from 35,000 tonnes per month during the monsoon to 40,000 tonnes and from 45,000 tonnes per month in non-monsoon season to 50,000 tonnes per month. In this, the May mission of India's Planning Commission to Bangla Desh which resulted in India's offer of Rs. 60 crores in short term and long term aid to Bangla Desh must be taken as no more than an agreement of intentions, letting Bangla Desh come up with what it really wants and what will help the realisation of its First Five Year Plan. The details of the agreement should be negotiated in light of these principles and what has been suggested should be simply the broad areas to be studied in depth. In fact it is to be regretted that in the present situation and atmosphere, as much details were set forth in the discussions. For instance, the suggestion to use Rs. 15 crores as short term credit for the purchase of sarees, lungis, and cotton cloth, Rs. 10 crores to cover the non-fulfilled parts of the limited payment agreement, and other specifics could have been avoided. On the other hand Bangla Desh government has asked the Metallurgical Engineering Consultants (formerly CEDB) to prepare a feasibility report for a steel plant, using the gaseous reduction process, as it has vast gas reserves in the country. Similarly assistance to Bangla Desh in setting up a fertiliser plant, increase its cement production, a joint transport commission which can effectively use the road,

rail and river systems of the two countries including the Calcutta-Assam riverine link, aid in agriculture and cotton growing, flood control and irrigation joint planning, credit for supply of diesel pumps, bridge building, supply of engineering goods, development of power transmission and distribution systems in a coordinated manner—these are the areas which Bangla Desh has expressed an interest in and it is here that India can be of assistance, provided it waits for the country's expression of interest and needs in its First Plan development.

Monetary crisis and monetary reform: June saw all the monetary crisis trends, outlined in the last issue, continue (see pages 411 and 412). In early June the price of gold shot up to $128 an ounce in London which was three times its official price of $42.22 per ounce, and through the month it remained in all markets above $110. The time is now really ripe for the governments to face an elemental fact—namely whether the official price of gold should not be raised to somewhere around $110-120 per ounce as one means of importing a stable base for the international monetary reform that is needed. Whatever international inflationary effect it may have, will be more than offset by the spurt it will give to international trade—particularly to the trade of developing countries—from the increased gains in the reserve of the developed countries. This may be one way of sharing out the gains rather than through a formal transfer to the developing countries, which the developed countries will never accept. But even more such a decision will provide a stable basis for the functioning of a system of stable exchange rates by making possible the convertibility of the currencies of all developed countries into one another and gold to a limited extent. Second the floating rates in Europe began breaking down with increased inflow of speculative funds into the countries and the heavy trade surplus of West Germany in May. In June the mark gained more than 12 per cent in value against the dollar and the West German Central Bank had to sell 1,5C0 million marks within the last week of June to keep the mark's level within the limits allowed by the European float. And so on June 29 the West German government revalued the mark up by 5.5 per cent against the currencies of France, Holland, Belgium, Luxemberg, Denmark, Norway and Sweden. At the same time the dollar kept dropping through June in all the European countries, despite the good showing of US balance of payments in April. Here we are back again dealing with the problem of the international flow of funds—the Euro-currency fund—referred to in the last issue of the Bulletin (page 412). Text book teachings are to promote in every way international capital mobility in order to spread technology transfers, share the higher propensity to save, of the rich countries with poor countries, etc. But in the past year international capital flows have forced exchange rate changes, have caused inflation in receiving countries and have shown up the limitation of this side of international economic life. The greater volatility of international capital in the past 12 months have been due to the free convertibility of the developed countries' currencies, the growth of giant multi-national corporations and Euro-currency markets, the quick response to small changes in interest rates and the use of exchange rate changes to correct balance of payments problems. The problem that we face is that these features of a fast moving international capital flow system will continue into the future and the international monetary reform and system to be adopted must deal with this fact. Allowing exchange rates to float is no response to the international volatility of capital as it introduces an unnecessary element of

uncertainty in international trade; further a serious upward or downward change even in a floating exchange will not be accepted by a government if it finds it unjustified as we have just seen demonstrated by West Germany; and finally the maintenance of the float calls for much larger funds than even the richest countries have as shown during last February and March. If only it is possible to distinguish capital flows for investment from those for speculation, some controls can be devised. But such a distinction cannot be made as recent experience has again demonstrated. Thus the 5 point plan put forward by IMF for monetary reform—namely wider margins which can limit the size of capital flows, harmonisation of interest rate policies, some administrative controls of speculation flows, separate markets for capital transactions and switch of officially held currency reserves to which the wider use of SDRs which the group of 24 has once more emphasised should be allocated directly to developing countries could be the basis of an agreement on reform at the September meeting of IMF. For this the group of 20 should meet in July and approve the reports of its 2 sub-groups on how speculative movement of funds can be controlled and the guide posts to help a country take action against a balance of payments surplus or deficit which will affect others adversely. These are all issues that concern the rich countries mainly, but the interest of the poor countries will be served if the dollar is stabilised and the rich countries adopt a system which promotes world trade and world development.

Gap between developed and developing countries: According to the 1971 UN year book, the gap between the developed and developing countries widened in the sixties—as noted in all previous issues of the Bulletin. The per capita income of developed countries doubled from $1,360 in 1960 to $2,660 in 1970 while there was a 60 per cent rise in the per capita income of the developing countries from $130 to $160. The average per capita income of the rich countries which was 10.5 times of the poor countries in 1960 widened to 12.6 times in 1970. While the developed countries growth was 5.1 per cent and the developing countries 5.2 per cent, the greater population growth of the poor countries resulted in a 2.5 per cent per capita growth of the poor countries compared to the 4 per cent growth of the developed countries. Some countries like Libya averaged a 25 per cent annual rate of growth, while others attained only a 1 per cent. The per capita income of US was $4,274 in 1970 and that of Japan was $1,658—a very big jump.

World food crisis: The Food and Agricultural Organisation points to a crisis in world food supply following from the low 1973 production and the inability of this output to meet the requirements of 1973-74. As far as wheat is concerned this means a rather sharp drawing down wheat stocks in exporting countries, which already are at the lowest level for the past two decades. With regard to rice, the FAO warning is supported by the Commonwealth Secretariat analysis. The export of rise is expected to decline by 2 million tonnes in relation to import needs, according to FAO estimates. The Commonwealth Secretariat in its rice bulletin points out that as the 1972-73 paddy crop declined to its lowest levels in five years, the demand for rice in the first quarter of 1973-74 could not be met. Thailand which has been the major rice exporter has had to cut back on its exports due to its declining stocks. The critical period for both wheat and rice is between June and September 1973, when if there is any further decline in world cereals production there will be a severe general grain shortage. The main causes for the tight

food position are the drought and other weather conditions of the last two years, the slow growth of agricultural production and fast rise in populations of the developing countries, the massive imports of wheat by the Soviet Union and China to compensate their reduced production, the disappearance of surplus grain stocks in countries like US, Canada, Thailand which in the past acted as a cushion and the monetary crisis and the continuing inflation in the developed world. It is hoped that this year rains will be normal and the use of HYV and fertilisers will increase production in Asia, the Soviet Union and the Americas.

Asian employment and Asian agriculture: Another FAO study indicates the close relationship between future employment perspectives and agricultural development in Asia. IBRD estimates that to employ fully the existing labour force, Asian countries will need a 10 per cent annual growth rate in their GNP. As this is not possible, the use of agriculture as the main employment generator for the rapidly expanding labour force in Asia—from 635 millions in 1960 to 763 millions in 1970 and 926 millions in 1980—is inescapable. And the plans of all Asian countries, India, Pakistan, Malaysia, Bangla Desh, Sri Lanka, Thailand are being restructured to invest more heavily in agriculture and rural development. On this basis, the following table shows the magnitudes involved over the past and the next decade in Asian employment and Asian agriculture.

		1960	*1970*	*1980*
			(Millions)	
Total population	...	1,459	1,830	2,300
Population dependent on agriculture	...	1,085	1,234	1,379
Agricultural population as percentage of total	...	74 4	67.4	60.0
Total labour force	...	635	763	926
Agricultural labour force	...	475	515	554
Agricultural labour force as percentage of total	...	74.8	67.5	59.8

The estimates of agricultural employment are based on the following assumptions: (a) HYV will absorb 30 per cent more labour per hectare because of the greater labour need in pre sowing and crop growing operations and the inputs application needed for a higher yield. Japan and Taiwan experience shows that the new wheat varieties demand 25–35 per cent more labour and the new rice varieties 40 per cent more labour, (b) the short growing season for the new varieties makes for multiple cropping and so fuller employment. At present less than 5 per cent of Asian agriculture is double cropped, (c) the small farmer who predominates in India, Bangla Desh, Indonesia, Burma and Sri Lanka unlike in Thailand, and Malaysia which have large farm holdings is more labour intensive. These assumptions, particularly the first, need further testing in the Asian countries. Meanwhile all structural obstacles—land tenure, landless labour wages, inputs, credit and marketing—must be removed by the Asian countries to push forward agricultural production with its employment generating potential.

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II. Agricultural Development

Food crops :

The food production target for this year in the State is, as pointed out in Vol. III, page 342, 79 lakh tonnes (as against 72 lakh tonnes in 1972-73) comprising 59 lakh tonnes of rice, 17.5 lakh tonnes of millets and 2.5 lakh tonnes of pulses. The consumption of rice in the State was 45.12 lakh tonnes in 1970-71 and is now around 46.68 lakh tonnes. This means that for the current year there would be a surplus of 12.32 lakh tonnes which can be used, (a) to build further the State's buffer stock, (b) to make an increased contribution to the Union Government's pool which it has been requested to do and (c) to meet the needs of Kerala which against a monthly need of 80,000 tonnes receives only 45,000 tonnes, and which together with Maharashtra and Gujarat, has appealed for rice supplies from the State. To meet this year's production target, 9 lakh acres will be added to the 96 lakh acres under rice cultivation. This additional 9 lakh acres will be under HYV, making a total this year of 45 lakh acres under HYV. Thanjavur alone will have 17.5 lakh acres (7.5 lakh acres Samba and 4.6 lakh acres Thaladi) under HYV, yielding 15.48 lakh tonnes which is over 25 per cent of the total rice production in the State. A new HYV suitable for sowing between June and August, CO-36, which is a cross between IR-8 and CO-32 has just been released by the Tamil Nadu Agricultural University and is being used over 60,000 hectares in single crop wet lands in Coimbatore and Salem districts. This will add 50,000 tonnes to the State's paddy production with a value at current prices of Rs. 3 crores. The sixties have been a good decade for the State's paddy production. The output increased from 35.52 lakh tonnes in 1960-61 to 53.03 lakh tonnes in 1970-71 and the per hectare yield stood at a high 1,974 kg. In fact under the Madras Fertilisers extension programme, an Erode farmer was able to produce this year 22.01 tonnes of paddy per hectare during a period of 290 days by raising three crops in his 2 acres field. His first crop Kanchi, (CO-34) came up in 90 days with a yield of 9.34 tonnes per hectare, his second was a crop of IR-20 in 110 days with a yield of 5.93 tonnes per hectare and the third again in 90 days Kanchi yielding 6.74 tonnes per hectare. The fertiliser application was 145 kg of nitrogen, 35 kg of phospheric acid and 75 kg of potash per hectare. This is really higher than the IRRI, Philippines record because that was in a trial demonstration plot. The Erode production was in the midst of our heavy power cut, which in its absence might have led to even higher yields and a fourth crop of pulses. The percentage of rice in the State's total food production increased from 63 per cent in 1960-61 to 77 per cent in 1970-71. Rice consumption in the State is steadily rising from 24 lakh tonnes in 1960-61, to 45.12 lakh tonnes in 1970-71 as noted earlier and will be to 59.05 lakh tonnes by the end of the perspective plan period. This progress can be traced to the use of HYV which starting with ADT-27 IR-8 has moved on to the use of Karuna, Kanchi, Ponni, Pennai, Karikalan and Cauveri, full use of the State's irrigation sources - canal, tanks, and wells, a well organised extension service, and a cooperative movement which last year distributed Rs. 65 crores of short term credit for the purchase of seeds, fertilisers, etc. and Rs. 20 crores as long term credit for wells, tractors, etc. For the future the lacks and gaps in this production picture must be corrected and filled in. On the seeds side, seeds suited to our varying climates and soils such as the short

duration Kuruvai, the semi dry paddy lands, the pest ridden fields as well as the use of quality seeds must be pushed. At present only 1/3 of our lands are using quality seeds which can increase output by 29-30 per cent. Further the extension services need to help the farmer to use only the amount of seeds needed. It is estimated that the farmers should use only 5 lakh tonnes of seed per annum but actually use 7-8 lakh tonnes, losing thereby Rs. 3 to 5 crores. There is also the perennial fertiliser shortage and poor distribution and use. The farmer is using less than 50 per cent of the nitrogen that HYV calls for and to remedy this, fertiliser production and supply must be increased, its distribution assured and the extension services geared to help him in its proper dosage which is 50-75 kgs per acre. The decision to distribute fertilisers through the 5,000 primary societies of Tamil Nadu cooperative marketing federation is sound, if it can ensure that the small farmer is serviced fully. The Erode farmer's experience indicates that we may be on the eve of a big breakthrough. There are also problems of the timely provision of credit to the small farmer, the marketing problems and the price which with the decision of the Chief Ministers' :onference referred to earlier should give ıim an increase beyond the May procure-ıent price increase which was from Rs. 47 › Rs. 49 for the coarse variety, Rs. 51 to for the medium variety, Rs. 54 to 56 r the fine variety and Rs. 56 to 58 for : super fine variety. Farmers are still nplaining that in May they were being d Rs. 35.50 to Rs. 37 per bag of 57 kilo ns and that after meeting the increased from 20 to 25 per cent, movements in the State were not being adequately ıed. All these should be attended to her with execution of the concessions ınced by the Chief Minister at the f May, of postponement of agricul-income tax, repayment of slices of loans and electricity dues to help fa hit by drought and last year's floods.

Research needs and results :

Drip irrigation techniques and exp ments are being tried in Tamil Nadu A cultural University and two other cent in the Country as part of research in wa management and improved irrigati methods in growing fruits and vegetabl In perforated drip irrigating laterals us in growing tomatoes, onions and venda not only was the size and weight o vegetable larger, it saved 47 per cent o water and increased the tomato crop for instance, by 2,200 kg per acre. The cost of the lay out of this is a low Rs. 1,400 per acre, its tillage is less, its product is larger, it is less prone to disease and it needs a shorter growing season and can use poor lands: The use of such scrub land is also the point of the SPIC adaptive research farm in Tuticorin which is experimenting in growing vegetables after clearing the scrub and is now planning on using underground saline water through osmosis and other techniques. The University has also successfully produced a new high yielding variety of Papaya, CO-2. Its papain is used in many ways in industry and medicine. The new variety yields 120-150 kg of papaya per acre (compared to 80 kg by the other trees) and 4 gms of papain per fruit. Another successful experiment at TNAU Coimbatore is the non-chemical methods of pest control under which female insects are used to decoy and destroy male pests. Such a technique is being used to counter the common pest on plums and peaches in the Nilgiris and Kodai and the maize crops in the plains. Once the attractants are bred in large quantities or by synthesis, this would become a major pest control instrument. Research on seeds is concentrating on such simple issues of how to counter the humidity and moisture in the air or in the

seed at the time of storing, which destroys so much of our quality seeds. For short periods insulation can protect them. For long periods of one to three years the seeds need to be dried and stored in dry bins. Their certification in retail distribution is imperative. The need for further research in sunflower, which is fast becoming popular in this State's production because of its oil bearing nature and acceptability to the consumer, is needed to counter the problems of low yields experienced. The first season's planting has brought to light the inadequacy of moisture, synchronisation of rain and inadequacy of fertilisers. These and the timing of harvesting the flower when it is dry or when it is still maturing when the seeds should be left to dry and the stacks utilised for fodder must be established. The effect of climate and rainfall distribution and the needed fertiliser should be further studied to increase the producing of this important crop. A further area calling for research is in tobacco—all varieties ranging from Virginia to Beedi—where new cross breeds are needed to (a) increase yield, (b) improve quality and, (c) resist nematode and other pests. In rubber research a new HYV has been developed with the higher per hectare yield in the world—RR 11-208. This first result needs to be tried out in demonstration plantation more extensively in order to test how far the first yield of 4,000 kg of rubber per hectare stands up. The results will then have to be related to the growing rubber supply in the Country to which reference was made earlier.

Sericulture :

A recently started industry, the State is developing into an important sericulture centre, with plans to increase its annual silk production from 2,000 kg to 10,000 kg. The 2 acre trial mulberry cultivation at Vinnamangalam in North Arcot district produced an annual income of Rs. 10,000 per acre because of the high quality of silk produced. 50 small farmers in the area bounded by Vaniyambadi, Tirupattur and Ambur have taken up silk production in their small holdings. As part of the SFDA and MFAL programmes in North Arcot, South Arcot, Tiruvellore and Madurai districts, mulberry production is being developed with the Union Government supplying mulberry cuttings, rearing appliances, loans for sinking wells and building sheds for feeding the silk worms. 26 acres are being used for this programme with Rs. 5 lakhs from the SFDA, MFAL funds. Similar developments are planned for Dharmapuri at a cost of Rs. 3 to 5 crores, as recommended by the IIPOR techno-economic survey and in Coimbatore. This is a budding industry which can also be a means of countering under employment of the small farming families.

Coconut :

Another expanding programme is that of extending coconut cultivation of the State from the current 8,000 acres against the Fourth Plan target of 10,000 acres to 25,000 acres during the Fifth Plan. Two coconut nurseries in North Arcot and Salem districts for producing 1 lakh seedlings have been started, including the hybrid DXT and TXD seedlings which are resistant to the Red Palm Weevil, now attacking the trees in North Arcot. These hybrids face only a 5-8 per cent pest danger compared to the 50 per cent of the West Coast tall variety. Further the research institute in Kerala has demonstrated that coconut, cocoa, pineapple, pepper, grasses and legumes fodder can be grown as mixed crops in coconut gardens. Being the second largest coconut producer in the Country, more attention needs to be given to the use of fertilisers to the coconut trees, which is not done. Over an organic manure dressing a balanced dose of 0.5 kg of nitrogen, 0.32 of phos-

phorous and 1.2 kg of potash should be provided per year for each tree.

Indo-German project :

The Indo-German project analysed in Vol. II No. 12 page 26 and Vol. III page 30 of the Bulletin is to be extended for a further period of 5 years from June 30, 1973. The second and third phases of the Nematode control programme and the further development of a crop rotation pattern for the Nilgiris involving extensive cultivation of vegetables and strawberries, apples, plums and pears is to be launched during this period. The vegetable marketing under the project is entrusted to Nilgiris cooperative marketing society which has launched a good distribution programme. In addition as noted in the earlier issues, it is essential that the five marketing centres for the vegetables, the 1,000 tonnes cold storage plant at Ooty at a cost of Rs. 5 lakhs and the export scheme for cut flowers should be expeditiously implemented.

Pulses :

Unlike the State's performance in rice production, 1972-73 ended with the production of 2 lakh tonnes of pulses against the State consumption of 8 lakh tonnes. The efforts so far to increase pulse production have not been successful (see Vol. I No. 5 page 1, No. 3 page 3, No. 9 page 8, Vol. II No. 3 page 8, and Vol. III page 183 of the Bulletin). 20 lakh acres are under pulse cultivation and last year's target of 2.5 lakh tonnes could not be achieved. Hence 5.37 lakh acres in Thanjavur have been brought under the rabi crash programme and a further attempt is being made to produce it as a mixed crop. In 30,000 acres of sugarcane, a new variety of green gram and anjugam have been successfully grown with a yield of 100-150 kg per acre. Also the Pudukottai programme of growing the short duration variety of red gram with irrigated groundnut has been equally successful. It is now planned to extend the mixed growing of pulses in all sugarcane and groundnut producing lands as one means of increasing the State's pulse production.

Cotton :

The State is in deficit in cotton production by two thirds of its consumption (see Vol. III page 109 of the Bulletin). 307 of the Country's 678 cotton mills are located in the State with a spindlage of 23.3 per cent. By the end of the Fifth Plan the gap between production and consumption should be narrowed, if the State Planning Commission's programme is accepted. The consumption then will be 15.61 lakh bales and the production would have more than doubled from the present 4 lakh bales to 9.22 lakh bales. To start this process, the Government is extending cotton cultivation in one lakh acres of rice fallows in Tiruchirapalli and Thanjavur districts and one lakh acres of dry cotton cultivation in Ramanathapuram. One of the factors impeding expansion of cotton cultivation is the lack of marketing arrangements in districts like Thanjavur (see Vol. II No. 9 page 19) and the fluctuating prices. Here as suggested in Vol. III page 109, the Cotton Corporation of India has decided at its June end meeting to open purchasing centres wherever ginning and pressing facilities are available and purchase the 40,000 bales of MCU-4 and MCU-5 varieties. The State Planning Commission has, however, suggested in view of the seriousness of the stakes for the State, the establishment of a cotton marketing Board which will stabilise cotton prices and assure the growers remunerative prices. The Government should now act on this proposal if cotton cultivation is to attain the Fifth Plan target.

Tea :

Tea production in 1972, as analysed in Vol. III page 258, increased substantially in the North to 350.6 million kg and marginally in the South to 101·3 million kg. Sri Lanka's production fell by 4 million kg. while East Africa increased their production by 28.9 million kg. The export performance of these groups show that India and Sri Lanka are declining, while Africa is rising as in the following table :

PERCENTAGE SHOWN IN WORLD TEA EXPORTS

	1951	*1961*	*1971*
India ...	45	37.9	32
Sri Lanka ...	30.2	35.5	31.2
East Africa ...	3	5.9	11.3

For 1972 Indian exports increased only by 1.3 million kg. while those of West Africa increased by 17.3 million kgs. This trend is continuing in 1973, when in the first three months Indian exports dropped by 6 million kgs. The decline in Indian exports is linked only in part to our production not keeping pace with the demand compared to East Africa as seen below

PERCENTAGE SHARE OF WORLD TEA PRODUCTION

	1951	*1961*	*1971*
India ...	48.5	41.2	38.9
Sri Lanka ...	25.2	24.0	19.6
East Africa ...	2.8	4.3	7.4

This is much more due to the fast increase in domestic demand and our diversion of the exports from convertible currency area (with a rather heavy concentration on the UK market) to the bilateral and rupee payment areas as the following table shows:

PERCENTAGE SHARE OF MARKETS

	Convertible currency Area		*Bilateral Area*	
	1961	*1971*	*1961*	*1971*
India ...	40.72	27.08	40.7	58.1
Sri Lanka ...	32.54	26.01	23.1	22.8
East Africa ...	7.00	15.76	Nil	Nil

Thus the stagnation of our export trade is not due to declining foreign demand which is increasing as the bilateral demand shows. It is due to our not increasing production and exports but simply diverting exports from one area to another and indirectly promoting re-export of our tea. Under these conditions the major concentration should be increase in tea production. This involves a planned programme of replantation particularly of the 13.5 per cent of our gardens which are above 70 years old and well past economic production and a further 40 per cent which are between 30 and 70 years old. The norm of replanting 2 per cent or 7,000 hectares annually in place of the present 0.35 per cent and new plantings for which 1,600 million bushes in the existing area can be accommodated should be planned. This requires heavy finance which can be provided by allowing the tea industry the same kind of depreciation allowance granted coffee and rubber. With that, a rehabilitation fund can be established and the programme of planting and replanting launched. For this State, the immediate problem is the 75 per cent of power cut which at the end of June has not yet been lifted or reduced for this industry. The tea leaves are now coming to the factories and power must be given to them to save this year's production. The Government has also decided to add 4 more cooperative tea factories to the existing 8 (see Vol. II No. 10 page 63) as part of the educated unemployment relief scheme. Agricultural graduates employed in the factories will give small farmers

help in raising tea plantations, increasing productivity in tea garden and execute pest control measures. This agro-service should further increase the State's production of tea.

Coffee:

Despite the general improvement in coffee production and earnings in the Country reported in the last issue of the Bulletin (page 418), the southern coffee plantations are facing a period of increasing costs and declining profits and inadequate development activity particularly in this State. Two companies have reported a fall of production by 40 per cent. These results are reflected in the depressed demand for their shares in the Madras Stock Market. However, the long term trends can be improved if soil improvement, better plantation systems, use of HYV are vigorously pursued and the industry is given its share of development credit by the banks and ARC.

Animal husbandry and fish farming:

Buffalo breeding is receiving special attention at the buffalo breeding farm in Alamadi for the Murrah breed. The Indian Murrah buffalo—unlike the Chinese Swamp buffalo—is both a heavy milker and a good drought animal. It averages 7.82 pounds of milk a day as compared to 3.74 pounds of the equivalent cow. In addition it is a major source for the by-products—ghee, cream and butter. Out of the world population of 110 millions, India has 52.8 million buffaloes and its further development should be one of the major aims of the State's animal husbandry programme. It can also be a good meat producer, which must double according to the State Planning Commission during the Fifth Plan. In the area of fish farming, the Government is now setting up a State Fisheries Corporation to execute the Rs. 45 crores plan of the Planning Commission to mechanise fishing, develop fishermen's cooperatives with interest free loans of 20 per cent and establish the needed infrastructure as outlined in Vol. II No. 12 pages 2 and 3 of the Bulletin. One aim is to double catch to six lakh tonnes and increase annual export earnings from the current Rs. 2 crores to Rs. 5 crores during the Fifth Plan period. The State Planning Commission and the Government are working closely on the realisation of this important programme.

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III. Industrial Development

Salem Steel:

With the signing of the Rs. 2 crores technical consultancy agreement between Salem Steel and Dastur Company at the end of May, the next phase in launching the project has been undertaken. The Chairman of Salem Steel is the chairman of HSL. Under the agreement the first phase of the plant is established, namely identification of the equipment needed for the cold rolling steel complex which will produce the special steels by cold rolling intermediate hot rolled sheets which will have to be imported, and the preparation

of a detailed project report for the iron and steel making sections of the plant. Dasturs will have to make their report on both within 12 months. This first phase which will cost Rs. 50 crores will be completed in 56 months so that by 1977 Salem products will be on sale. The other phases consist of melting stainless steel in electric arc furnaces, continuous castings of slabs and hot rolling of them to produce the feedstock needed for the cold rolling mills and the final phase of iron making and type conversion of the iron into steel through LD convertors for processing into cold rolled electrical steel sheets. As the project is starting with cold rolling backwards, the decisions on the processes to be used are being decided in light of international tenders. One of the major decisions is the purchase of the Rs. 50-60 crores know-how for the cold rolling complex. The Witten process of the West German firm Eldesta (see Vol. II No. 10 page 21) will be compared with other offers before a final decision is taken. Decisions on the Vijayanagar plant are also moving forward. Its proposed 3.3 million tonnes capacity to be built at a cost of Rs. 750 crores is to be examined by the Public Investment Board, along with the CEDB recommendation to import the major part of its equipment and a decision to give CEDB the consulting responsibility to prepare the detailed project report to be completed within 15 months. CEDB is impressed with the site at Tornagal, the infrastructure and the Donimalai Iron ore suppliers available nearby. There will be, however, no relief of the Country's steel demands during the Fifth Plan from Vijayanagar and Vishakapatnam projects.

Neyveli :

Beyond the immediate Neyveli lignite expansions planned as outlined in the last issue (see page 421) the Ministry of Steel and Mining, particularly the late Minister himself, have now decided to secure Union Government approval urgently for the expansion of the present mine, the development of a second mine and extension of the power generation as set forth in Vol. II No. 6 pages 5, 27-28 and Vol. III pages 173 and 348 of the Bulletin. The Ministry has proposed that the present capacity of the mine be expanded from 4.5 million tonnes per annum to 6.5 million tonnes by 1978 at a cost of Rs. 30 crores. It has also proposed that a second mine cut be opened with a capacity of 10 million tonnes at a cost of Rs. 100 crores. And it has recommended that a second power generation of 1,000 MW be set up at a cost of Rs. 200 crores. This turn around of the Union Ministry is due to two main reasons. First the new management has helped Neyveli to be pulled out of its stagnation and its power generation has been running at 400-450 MW per month as pointed out earlier. In May it supplied the Tamil Nadu grid 2,360 lakh units. In view of the loss of production in the briqueting and carbonisation plant which had to be first slowed down and later closed till June, the State Government is planning to compensate NCL. Since early June production of leco in the briquetting and carbonisation plant and from mid-June production of urea in the fertiliser plant have been resumed. Given this performance there is no longer any reason to hold up approval of the expansion plans. The expansion of the power station by an additional 1,000 MW is necessary and inescapable if the power needs for the State's industrial and agricultural progress are to be met. This together with the Thermal unit at Tuticorin are the only projects which will compensate the over heavy reliance (70 per cent) of the State on hydel generation. And on a pure cost benefit analysis, the expansion of the present mine and the

opening of the second mine is indicated because the alternative, that of importing coal from West Bengal, Bihar and Singareni, is even more costly and, with the railway bottlenecks, highly uncertain. In fact, the comparative cost of Ennore operated with imported coal is higher than that of Neyveli operated with local lignite. It is now to be hoped that the Union Finance Ministry and Union Planning Commission will approve the proposals of the Union Ministry of Steel and Mines and work can begin on the projects during the current year and so help the State's Fifth Plan. The decision on equipment for the expansions also should be made now. On the whole it is desirable to continue the use of the West German bucket equipment for the second mine cut as suggested in the feasibility report, as the equipment has been improved and is the best available on the market. The second thermal plant will require equipment to be imported, not because BHEL cannot produce it, but because its capacity is now fully used for Bokaro. It is possible to get this equipment from East Germany or one of the other rupee payment areas. The imperative is for early decision and speedy action on all three proposals.

Bhel :

BHEL, along with HEIL, will be supplying during the current year power equipment to generate over 2,000 MW. Its good performance referred to earlier, in 1972-73 involved the supply of power equipment to generate over 1,100 MW. In addition BHEL has set up an after sales service for its customers particularly for spare parts and special maintenance. It is now for the State Electricity Boards which have been supplied 3,200 MW of equipment to install and commission this equipment to counter the power shortage of the Country. BHEL's delivery time of 36 months compares favourably with that of foreign suppliers. It compares even more favourably with the delivery time of the two steam generators of 56 tonnes each fabricated by a Bombay firm and now being installed at Kalpakkam which will be installing six more such boilers at a cost of over Rs. 70 lakhs each.

Cooperative sugar mills :

In addition to the seven cooperative sugar mills, three more cooperative mills are being set up. The seven mills which have not been doing well with a total crushing of 10 lakh tonnes for each of the last two years and accumulated losses, are now turning the corner and for the current year producing sugar at the rate of 13 lakh tonnes for the year. The three new cooperative mills are to be located in Vellore, Tirupathur and Coimbatore, will have a crushing capacity of 1,250 tonnes per day each and will begin producing by 1975-76. The share capital of the Vellore and Tirupathur plants is Rs. 114 lakhs and that of Coimbatore Rs. 40 lakhs. Of this total Rs. 154 lakhs, the State Government has contributed Rs. 118 lakhs and the balance by the cane growers who will receive bank loans of up to 90 per cent over a five year period in purchasing their shares. Before the State expands cooperative mills further in new sites--Sivaganga, Ramanathapuram, Tiruchi, Thanjavur and Salem districts, it is essential that the 10 cooperative mills, seven of which are operating, should function on a basis of a comparable efficiency of the 9 private mills in the State.

Cement :

The cement shortage continues in the State and the cement distribution controls referred to under the national section apply to the supply and distribution of cement in the State. The monthly production of cement in the State went down to 1.2 lakh tonnes in May against

the normal monthly output of 2.5 lakh tonnes. The normal monthly consumption in the State is what was produced in May. But this May production of 1.2 lakh tonnes include the 600 tonnes for Maharashtra and 912 tonnes for Kerala earmarked for them against their power-supply of 60,000 units and 1 lakh units respectively (see Vol. III page 231 and 314 of the Bulletin). Further the industry is still awaiting the Government decision on raising the price of cement promised at the time of the Prime Minister's award of an additional Rs. 25 per worker. A price rise of Rs. 20 per tonne is being urgently demanded, meanwhile the distribution procedures in the State have been slightly eased from July 1 by authorising district Collectors instead of the Director of Industries to make allotments of one wagon load cement (330 bags) to individual applicants. Also the certificates of reasonableness can now be issued by any engineer of gazetted rank and not only by the assistant engineer. For July-September the State's allosment is 3 lakh tonnes, which is a slight improvement. But all these controls should be ended when the power cut is lifted and cement production returns to its normal position.

Yarn :

The paradox of stock piling of yarn in the mills and the dearth of yarn with the weavers reported in the last two issues (Vol. III pages 349-350 and pages 423 and 424 of the last issue) continued with the State up to the end of June. The effects of the easing of the power cut for textile mills referred to earlier have not yet had time to affect the situation. By June SIMA announced that its member mills had accumulated 40,000 bales of yarn valued at Rs. 10 crores. One mill in Coimbatore which had invested in generators to keep up production had accumulated Rs. 45 lakhs in stocks against a normal stock of Rs. 4 lakhs and was therefore facing closure on June 1. Another small mill with a spindleage of 20,000 had accumulated Rs. 30 lakhs of stocks. On the other hand apart from the weavers in the cooperative sector who were given yarn produced by cooperative mills and the mills taken over by TNTC (see Vol. III page 261 of the Bulletin), weavers continued to face a yarn famine. Against this situation the State Government announced its willingness to procure the entire stock with the mills, if the Union Government approved such a course. It also made arrangements with the RBI to extend loan facilities to the Tamil Nadu Handloom Weavers Cooperative Society to procure up to Rs. 8 crores instead of the normal Rs. 40 lakhs for yarn procurement. The Government also procured from SIMA 4,000 bales and distributed them to the weavers As pointed out in the last issue (page 423) against the monthly need of 40,000 bales (20,000 bales of hank and 20,000 bales of cone yarn, plus 1.2 lakh bales needed by composite mills), the textile commissioner allotted 41,000 bales for the three months March-May and 16,000 bales for June. At the June 9 conference of Chief Ministers there was agreement to lift distribution controls over cotton yarn of counts below 17s and industrial yarns and as a result these yarns are now being lifted briskly and distributed quickly. As long as the power cuts continue, the production controls should not be released in order to prevent a change in the production pattern. This points to the only real solution to the yarn distribution crisis in the State and the Country. The distribution controls did not serve their purpose of making scarce yarn available to the handloom weavers. Neither CCI nor the distribution machinery in other States are set up to undertake this important task. The handloom weavers have suffered not only from the primitive official distribution machinery but the allocation of 60

million kg against the proposed 80 million kg loaded the situation in favour of power looms. The path for the future is to decontrol yarn distribution, if necessary by stages, so that the Government can be freed of their responsibility and simultaneously to provide the power for the mills to function and produce fully. Coimbatore Handloom Weavers despite yarn scarcity face a further problem of Rs. 2 crores handloom goods in stocks. The Coimbatore 100 counts sarees are not being cleared in this or other States. The 40 percent excise on foreign cotton is exercising both handloom weavers and the State's textile mills who feel that their needs of extra long staple varieties and handloom needs for fine and superfine counts will be met only at a higher cost. The price of 100 count yarn has risen abnormally from Rs. 72 per bundle of 5 lbs to Rs. 92 in the controlled market and from Rs. 80 to Rs. 120 in the open market. Handloom weavers are thus caught in a pincer of rising stocks and rising costs and need relief. The Tamil Nadu Handloom Finance and Trading Corporation can help a little through more generous loans and lower interest rates. The State Government has once more impressed on the Union Government the necessity for the statutory reservation of the production of dhoties, coloured sarees, towels and bed sheets to handlooms as one means of meeting this problem (see Vol. III page 115). Another source to be developed is the foreign markets for handloom products from this State as part of the drive to expand our handicrafts sales. In this connection the complete census of handlooms in the State undertaken by the Governments' handloom department and the Union Government's census department will be a means of rationalising and developing this industry.

Small Industries:

Small industries in the State will be benefiting from a series of ameliorative measures that the Government has introduced. Following the recommendations of the State Administrative Reforms Commission (see Vol. III page 114 of the Bulletin) the Government has established the Assistant Director of Industries in the district as the single point to which small industry applications need be made. A cell in that office will obtain all the necessary clearances and the District Industrial Committee will at its periodical meetings review progress in clearing applications. Secondly to meet more promptly and a little more adequately the raw materials needs of small industries, a State-wide census is being undertaken in August and September and on this basis a more equitable distribution of raw materials will be possible. In the case of some raw materials there are serious bottlenecks. In plastics the availability is 10 per cent of the State demand and more liberal import is needed. In iron and steel also the supply to the State is 10 per cent of the requirements and here a more rational Union Government distribution can be effected. In the case of aluminium ingots, MALCO has stopped production because of the power cut, so that purchase must be made from outside the State. For coal and coke which is affected by wagon shortage, bulk movement of bulk orders could be the answer. Third the Government orders placed in small industries have been increasing in recent years from a little less than Rs. 1 lakh in 1967-68 to near Rs. 2 lakhs in 1970-71. This can be further expanded. Finally the most urgent help needed by the small industries is to restore to them the power cut as a result of which 200 units have had to be

closed. The recent release of power to certain categories of industries should include small industries, who in turn can offer to use the surplus power available in the State at night by working night shifts.

Tidco :

TIDCO has received a letter of intent for setting up a joint sector plant, the Tamil Nadu Fluoride and Allied Chemicals Limited, at Manalur, near Madurai to manufacture 3,000 tonnes of aluminium fluoride per year, a chemical used in producing aluminium. The Country's demand is over 10,000 tonnes and current production is 2,400 tonnes, so that over three times of the internal production is being imported. The raw material needed by the plant, fluourspar will probably be imported from Spain in about 5,000 tonnes and some of the technology will also be imported. The cost of the project is Rs. 3 crores of whieh Rs. 1.2 crores will be equity, shared by TIDCO (26 percent), a private firm (25 per cent) and the public (49 per cent). The project should begin productton by 1976.

Madras Fertilisers :

The Rs. 65 crores Madras Fertilisers which produces 1,600 tonnes of LPK daily (on some days, it actually produced 1,827 tonnes) against a designed capacity of 1,600 tonnes and NPK fertilisers has been asked by the Union Government to double its capacity. Its first expansion phase will involve creation of another production stream of 672 tonnes capacity of NPK manufacture and building a special plant for the production of phosphoric acid, which is now entirely imported for the Country from Mexico. The increased NPK capacity will cost the firm Rs. 15 crores and will be undertaken. The doubling of the capacity will be much more expensive, particularly in view of the escalating world prices of fertilisers machinery and is under study. This is one of the firms which can quickly expand and operate to capacity (from its current 75 to 90) in order to meet the State's growing fertiliser demand and deficit.

Leather :

At the end of June, the Union Government finally announced its quota scheme for leather exports. 1972 is the base year for reducing the exports, 20 per cent in the case of chrome tanned cow and buffalo hides, and 10 per cent for ET and chrome tanned cow calf, buffalo calf, sheep and goat skins. STC is to make the pro rata allocation to each unit for each type of hides and skins, depending on its average production during the last three years. The allocation of quotas to individual exporters will be done by the Chief Controller of Imports and Exports. Small exporters will receive their full quota on the basis of the past 3 years record. It is a pity that this restrictive part of the leather exports decision has not been accompanied by a decision to develop the infrastructure for finished leather and manufactured goods, the award of 15 per cent cash subsidy for the export of finished leather and other measures to develop the industry also recommended by the Seetharamiah Committee (see Vol. III pages 189 and 261 of the Bulletin). This is due to the fact that the 2 Union Ministries concerned – Industrial Development and Commerce – are at loggerheads over the nature and function of the Leather Authority. The former wants it to undertake both industrial development and export, while the latter feels that problems of exports are so complex and intricate that there must be a single authority for exports. Now the matter has been referred to the Union Cabinet and no decision is likely to emerge for another 3 to 6 months, while the trade suffers. The export trade in finished leather for this year is likely to

increase from Rs. 8 crores to 20 crores out of a total export of Rs. 130 crores—very largely due to the foreign demand, the goodwill built up and past momentum. But the absence of positive action by the Government has made the leather traders in the State unhappy. They point to the negative, restrictive aspect of the quota system, to the real danger that the delay in creating infrastructure is an invitation to large and monopoly house to expand and absorb the small tanners, and also to the long term harm to our export prospects. For instance, it is pointed out that the 10 per cent cut on sheep skin export will release 10 million pieces of sheep skin valued at Rs. 8 crores for finishing without any infrastructure to produce finished leather out of them. For that the Government should allow import of machinery and chemicals under the open general license system. If the Government finally opts for a single Authority, it will require parliamentary legislation. If it chooses two corporations, it can be done by executive decision. For the present speed on positive action is called for, but within the Seetharamiah Committee's wise counsel for a single authority.

Private sector reports:

The annual report of South India viscose is a good case study of how the power cut has affected the industrial activities of the units in the State. From February 1973 the entire staple fibre plant and a part of the Rayon plant were closed down. The pulp plant and a part of the Rayon plant were run at full stream with the help of a captive generator. Due to water scarcity even these two plants had to be closed down for three weeks in May. Next year's report will reflect the production and financial results of these disturbing events.

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The present report refers to 1972 where the main disturbance was the 46 days sirike in November and December 1972. The result was that production and sales registered a decline, though due to price rises the gross income and the profitability were not affected. The profit was Rs. 2.85 crores compared to Rs. 2.89 crores for the previous year after depreciation. In fact the dividend declared for 1972 was 20 per cent (compared to 16 per cent in 1972). The company has signed a long term lease with the State government for the supply of increased quantities of pulp wood from the State forests and has successfully tested the future use of 2 new sources,— Eucalyptus Grandies and Eucalyptus Hybridus — for meeting the increased requirements of pulp wood. The company's expansion of the staple fibre plant with a capacity of 20 tonnes a day and the doubling of the capacity of the pulp plant have been approved through letters of intent and import licenses for starting them are awaited. These expansions will go some way in meeting the growing paper needs of the State in the Fifth Plan.

The Shaw Wallace annual report for 1972 refers to the discussions with the Government regarding non-resident shareholders ending with the Government order of December prohibiting transfer of the sterling company shares. The company's record of production, sales, income and profits is good. The performance of the units located in this State was satisfactory in the marketing of fertilisers, using Madras Fertiliser supply as well as that of its super phosphate plant which worked to capacity. The glue and gelatine factory also worked to capacity and sales and the quality of gelatine improved through 1972, though again the 1973 power cut affected not only the factory but also the tanneries from which its raw material is obtained.

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IV. Education Science and Health

Education in the Fifth Plan :

The National Education Plan established by the Central Advisory Board of Education (CABE) in September 1972 was revised by its Standing Committee meeting in June, 1973 — as foreseen by the Board (see Vol. II No. 11 pages 32-33 of the Bulletin). The revision was made necessary by the decision of the Union Planning Commission to allocate Rs. 2,200 crores instead of the Rs 3,200 crores on which the CABE plan had been based. In addition the Union Planning Commission's Education Task Forces reports and the overall educational plan established by its steering committee (see Vol. III page 364 of the Bulletin) and the recommendations of the CABE May Committee on informal education reported in the last issue (page 426) called for a revision of the 1972 September programme. The revised Education Plan is for Rs. 2,200 crores. Primary education is the major priority with an allocation of Rs. 1,100 crores and for the first time the plan explicitly recognises that the school by itself will not be able to carry out the constitutional directive of universal primary education. Hence the above provision includes multiple entry points and part time education for all children who cannot attend school whole time. The education of drop-outs thus becomes an equal priority as in-school primary education. A special emphasis on adult education with Rs. 40 crores is provided involving informal education, adult literacy and integrating adult education in all development programmes. Secondary education which has an allocation of Rs. 300 crores will increasingly be vocationalised and conform to the pattern 10+2+3. Technical education will aim at consolidation with an allocation of Rs. 180 crores. In higher education with an allocation of Rs. 330 crores enrolment will be regulated and greater emphasis will be placed on post graduate education. Development of informal education at all stages will include in addition to the provisions at the elementary level, programmes of out-of-school education at the secondary and higher education levels, with the proposal for the open university, and provision is also made for curricular renovation, teacher education and cultural programmes. The revised plan is good and well balanced and has the right priority and the innovations needed. The defects in the plan are that it continues the centralised educational tradition of the Country and does not move in the direction of disaggregated decentralised school programming that this State's plan does. Second the national Plan is only a framework. What will emerge as education in the Fifth Plan will depend on what the States decide. Third even this reduced plan is likely to be further eroded as was indicated under the Fifth Plan discussions in the State and National sections earlier. In that case the search for priorities within priorities must continue.

Unrest in education institutions :

With the passing of the examination season and the summer holidays, unrest in the educational institutions declined to 11 disturbances in June. Violence was the feature of three Incidents—Magadh University in Bihar where students set ablaze college files and records and attacked teachers because of the rustication of students who were copying in the examination, Udaipur college students in Madhya Pradesh who engaged in stone throwing and setting ablaze cars with the police firing tear gas shells in a fight over the treatment of injured students by the city hospital and Agartala students who were lathi charged when demonstrating for

drought and flood relief. In Madhya Pradesh the higher secondary examination resulted in 27 per cent of the 1,35,000 students having passed, mainly because on this occasion the authorities took effective steps against mass copying and favouritism in marking. The student leaders supported by some political parties, immediately began an agitation for a second free examination, and extra classes for all students to help them prepare for it. Though the education authorities turned down the demand, the Chief Minister because of its political overtones has asked for a study of the question by his Education Minister leading to a decision in July. Three groups of teachers have also been agitating and going on strike to improve service conditions. Teachers in 45 private aided colleges in Andhra and Sri Venkateswara Universities went on strike from June 20, much to the dismay of 45,000 students who were affeeted and protested the teachers' strike, in order to obtain regular payment of their salaries and have reinstated those teachers whose services have been terminated. In Erode teachers in a private college began a stay in strike because 12 staff were terminated. In Thanjavur the headmasters have called attention to the over crowded classes in secondary schools resulting in unwieldy classes and poor teaching and learning conditions. In Madras and Calcutta two school students are on strike because in one case they do not like the new headmaster who had been appointed and in the other because of the dilapidated condition of the school building. In Calicut two school students clashed over a transfer certificate, resulting in serious injury to several students. The Aligarh University agitation continued in June and student violence in Burdwan died down leading to its Vice-Chancellor agreeing to stay on. In the June series of incidents, the violence and breakdown of the systems continue in evidence with some incidents such as the teachers movements pointing to the needed reform of the system.

Start of the schools and colleges year:

The S.S.L.C. results in the State for this year are similar to those of last year commented in Vol. II No. 7 pages 27-28. Last year 60 per cent of 1,97,676 passed the examination, this year 51 per cent of 1,98,725 passed. Like last year, the first place was secured by two students from outside Madras city in Tiruvellore and Namakkal and in fact of the first 11 places are similarly by boys and girls from the moffusil. Only the 12th, 21st and 24th places are from Madras city. The city does not seem to be a very congenial place for study. Within the school system in the city and outside, parents once more show a distinct preference for private schools of high repute and for English medium sections within these schools. Coimbatore, for instance, reports a heavy rush for admissions in the sixth and ninth standards in private schools who closed admissions by the end of May, on the basis of the tests they conducted. On the other hand, the 14 municipal high schools are thinly attended, with few seeking admission because of the prevailing poor standard in them. Further the passing of over 95,000 students in the school final examination has once more led to a stampede to the University and PUC admissions. Colleges are receiving 5 to 7 times the applications in relation to vacant places. In this situation no student getting below 50 per cent has had a chance of being admitted unless he is from the scheduled or backward classes. This wastage of more than 60 per cent of the students who have completed their high school but who are really not qualified to pursue higher education can only be met by vocationalising high school education so that it is not a one way street to a college—which itself is for the majority a dead end as far as employment is con-

cerned. Under these conditions, getting recommendations from all and anybody including ministers, P.As., officials, M.Ps., etc. is flourishing, together with bribing one's way into college. The vicious system of donations from parents of sons or daughters who have secured poor marks is flourishing in some colleges, where the purchase of tickets valued from Rs. 50 to Rs. 1,000 for a future school drama has been set as the price of admission. This has led to the Education Department issuing strict instructions to private colleges not to collect donations and the Minister of Education has even stated that colleges which extort donations will not receive grant in aid. But the practice is going on and can be ended only by parents and the Government. The major solution is not to open more colleges particularly for student rejects, those scoring low marks in the S.S.L.C. as proposed by the Coimbatore Municipal Council, for that will not only be a waste of public funds, it will degrade the B.A., and B.Sc. degree and will be of no assistance to the student in finding employment. Another change needed is to multiply the optionals offered at the University. PUC should be scrapped as demanded by everyone, and the tradition of the brightest students entering the mathematics group, average students the natural science group and the dullards the arts group changed by multiplying the optionals and combinations of ubjects. Maths is becoming popular for many reasons—because it leads to the engineering course now once more in demand, and increases the total of the marks in the exam. The real reason should be that it is the basis for all other subjects – natural, social and human. The Tamil medium is once more the dumping ground for the not so bright. It may be that its further expansion should be held until students and parents realise that it is the language of thought and original reasoning. The 18 per cent reservation of seats for the scheduled castes is being strictly enforced in all colleges but the backward class reservation is a racket. Backwardness is an economic phenomenon and should not be treated as an ethnic one. The income limit for backwardness is now Rs. 2,000 and Rs. 4 crores are spent on 2.3 lakh students, including 1.15 lakh college students. This should be examined and more emphasis placed on merit for this group. The income limit should be lowered. Reservations should apply to scheduled castes and students from the poverty sector. The decision of the Government and the University to open two new colleges in North Madras and Tiruverumbur and to approve the opening of 4 private colleges at Coimbatore, Rajapalayam, Tuticorin and Nagercoil runs against the policy of not opening new colleges recommended by the State Planning Commission in its education report 'Towards a Learning Society' and the directives of CABE to regulate college admissions. It simply adds to the number of our graduate unemployed. And finally the Government grants are ever more thinly spread over these many institutions so that quality becomes impossible. The Government's 49 colleges cost it Rs. 4.3 crores: its grants to 127 private college amount to Rs. 3.5 crores. One way out of this financial racket situation is to increase fees at the graduate level and levy fees at PUC/Intermediate level—which is the Educational Plan's recommendation. Some decisions are needed, without regard to short term considerations, to raise the quality of higher education. In the engineering college field, the trend is right. There are eight engineering colleges and a Regional College, with a total intake of 1,100 this year for which 4,000 students have applied. The selection committee is meeting in Madras, Coimbatore and Tiruchi to interview candidates and select them. This

ensures a sound start. Rejecting the Union Government's advice to increase this year's admission, the State Government is maintaining the same number as last year and concentrating on improving quality. As for teacher training, last year all the teacher training schools were closed. This year they are being reopened on a much reduced and restricted scale. In Coimbatore district for example, 30 candidates are being admitted in each of 5 schools in Bhawasinagar, Avanashi, Thirumoorthinagar (all for boys) and Coimbatore and Erode (for girls). In the State as a whole, 108 schools have been reopened on this restricted basis for the admission of 3,240 teacher trainees. There will however be no monthly stipends for these trainees. It is planned to absorb half of the 20,000 unemployed teachers as teachers under the educated unemployed programme which will be referred to later.

Educational Reform :

Educational reform in terms of action is progressing slowly. Compulsory library education has been introduced for the sixth and ninth standard students in 250 high schools in the State, as a means of introducing self learning techniques. Like the two year out-of-school programme to prepare drop-outs for the ESLC referred to in the last issue of the Bulletin (page 426), the Sarada College Educational Trust in Salem is running a programme to help high school drop outs after Standard VII who have left school because of poverty. They will be trained in carpentry, plumbing, electrical wiring, weaving, tailoring, printing, nursing and typewriting. This is different from the basic training programme for drop outs in Madras. Diversity is one of the features of out-of-school education and this differentiation between the Madras and Salem programmes is an expression of it. Further, parent-teachers associations in all the 2,800 high schools and 50 per cent of the 3,300 elementary schools in the State are being developed not only to promote understanding and cooperation between parents and the schools but also to organise and operate a programme for the poor students in order to work and earn in local trades while they are learning at school. The Education Department has also set up a State Evaluation Unit in order to introduce a system of internal evaluation in the schools to correct the examination oriented errors of the present system. The revised syllabus up to Standard V is now in operation and new text books for science and mathematics for Standards I to V have been issued by the Tamil Nadu Text Book Society. The society has brought out history and geography books in English for Standard VI and English text books for English medium schools according to the new syllabus for Standard IV and V. This is the start of nationalising text books for English medium schools as all text books for the Tamil medium have been nationalised. There are still widespread complaints about the rising costs of text books and their non-availability due to poor distribution. This latter should be quickly corrected as the teacher cannot teach nor the student learn without this tool. Outside the State, the school reform movement includes the massive promotion system introduced in Kerala, just short of automatic promotion from class to class. Under the Kerala system promotion is to be 90 per cent in primary and 80 per cent in secondary schools. This is a move in the right direction, as the examination system is no test of ability and intelligence, leads to indiscipline as the section on unrest in educational institutions shows, encourages drop-outs and tells heavily on the poor sections of society. Other States should follow this system into which internal evaluation should be built. The

Director-General of ICAR has suggested that the study of farming should begin at the school level with a simple soil testing kit and nutritional seed kit through which the study of birds, identification of weeds, re-cycling of organic wastes, detection of alkalinity and acidity, the harvesting of water, etc. can be taught to make education of practical value. Its only cost is a well informed teacher who will encourage the child's questioning mind. Agricultural universities can help in this urgent transformation. At the university level, the structural reform movement is still at planning and discussion stage. The CABE recommendation to regulate admissions has not resulted in reduced intakes for this year and the Union Ministry's proposal to control the opening of new colleges through rigorous conditions of affiliation, making only the State responsible for opening new colleges and that too in under-developed areas where the need is clearly established, making full time student admission selective, while opening part time and self study programmes, the launching of the Open University—all these are being talked about but not acted upon for this year. In fact the rush into colleges, the opening of six new colleges in this State, are moves in the opposite direction. For the Fifth Plan starting in the next academic year these reforms should be put into operation. Another issue being debated is the number of colleges which a university can effectively service. The Kothari Commission recommended that a university should not have more than 30 affiliated colleges if it has to organise the curriculum and syllabus, examine its students and oversee the functioning of the colleges. The Gajendragadkar Committee recommended 60 colleges per university. The State Planning Commission's report recommended making 12 colleges autonomous, and bringing the rest under a State Council of Academic Awards with 2 or 3 regional centres which will give each centre 50 colleges. For Madras University the situation is serious. It has 158 colleges (to become 162) and had to examine 72,000 per university and 46, 000 graduate students last year. Here a break-up is needed. The question of how many students should be in a college class is also under debate. A Coimbatore teachers seminar has recommended that the class strength should be 50. With regard to college curriculum, the proposal of English language teachers to stream the students is a move in the direction of following the individual learning path of each student rather than the current LCM technique. The Tiruchi seminar of B.Com. teachers has recommended that the conspicuous absence of subjects of practical use like Central and State tax laws, industrial laws, advanced numerical analysis and business psychology should be corrected and should replace the present ill designed curriculum. They have structured their course into a semester pattern and propose internal evaluation and more intensive research. A recent survey shows that actual functioning of the revised B.A. and B.Sc. upgraded syllabus has very mixed reactions. As the old practice of question paper setters being different from the teachers of the subjects, in many cases the question papers did not touch the new portions of the syllabus. In other cases where they did, students just ignored them. Questions are still the standard essay type and not the short intelligence testing ones. Student performance is declining but this is being hidden by the instruction to examiners to value the paper liberally, sometimes the percentage of passes is even prescribed and the moderation marks syndrome further compounds the evils. Jabalpur University is abolishing its version—that of revaluation of papers. The time is ripe for introducing the semester spstem and internal evaluation. Another development in the State is the first successful 3 weeks

course in epigraphy in which 30 college students were trained. Given its importance as a source material for our history and that out of 80,000 inscriptions only 30,000 have been copied and 6,000 published because of lack of trained persons who could decipher and interpret the inscriptions, the proposal to start a college to train in epigraphy and allied subjects is a sound one.

Adult education and mass communication :

The Country's and the State's lagging programme of adult literacy has received strong support from the Bhagwati Committee on unemployment whose working group on education has recommended that the Government launch a mass literacy programme in the Fifth Plan to cover at least 50 million illiterate adults in the age group 15-44 by the end of the Plan. For this year 1973–74 it has asked the Government to launch pilot projects in 20 districts each to cover 2 lakh illiterates and on this basis extend the programme next year to 100 districts. The Committee looks upon this programme as a means of providing employment to 80,000 adult education teachers and of improving the productivity of the workers receiving literacy education. In addition, it recommends a job oriented out-of-school ("off the stream" it calls it) programme for the massive drop-outs from standard I to V (60 per cent), a further 15 per cent by standard VII and a further 9 per cent by Standard XI so as to prepare them for self employment at higher efficiency levels. The education and employment specialists in the Country have thus arrived at the same conclusion on the various forms of adult education. But with the financial constraints developing, the educational authorities are once more putting their limited resources in the school system, to the neglect of the out-of-school system which is its hope and reviver. When the Fifth Plan is finalised at the end of the year, the distance between words and action, plans and delivery will stand out. In this State, Thanjavur district is demonstrating effective functional literacy techniques. Every year the Kuruvai festival is celebrated in 800 villages and is the occasion for a vast adult education effort which has helped spread the new agronomic practices about the manure dosage, cropping patterns, etc. The Kumbakonam agricultural division displays a board at bus tands, hotels, etc, giving information about sowing techniques, paddy strains available, pesticides to be used at different stages and the pests which are current. The farmers are fast becoming avid readers of this type of useful information. The assistance of TV to this programme of adult education was referred to in the last issue of the Bulletin (page 427). The programme for a national satellite for television was outlined in Vol. II No. 10 page 29. Now the Union Planning Commission has set up a Task Force under the chairmanship of the Chairman of the Electronics Commission with the Department of Space, the Ministries of Information and Broadcasting, Communications and the Planning Commission as members to take into account the needs of adult education, agricultural extension, national resources survey and health and family planning and to draw up an integrated optimum system designed for maximum national benefit on the most economical basis in a time frame that will follow immediately on the satellite television experiment in 1975. That exeriment, it will be recalled, will make a test of a hybrid system involving both direct reception by augmented TV receivers in isolated village clusters as well receive and re-broadcast to conventional TV receivers with the help of VHF transmitters. The multiple beam satellite to be used will

cover different parts of the Country. Each beam will carry one TV channel of one video and 4 to 5 audio channels. On the basis of this experiment, the integrated national plan will become part of the Fifth Plan. Meanwhile the TV station in Madras is being readied, with the 3 storey building having been completed on the Government estate. The equipment and the 175 metre transmitter are being installed, so that the TV programmes can be broadcast from March 1974. Tfie programme should have a major education component.

Technical Education :

The Tamil Nadu Agricultural University is starting a post-graduate M.Sc. course in seed technology with 5 students being admitted annually to the course. The importance of the genetic and physiological purity of the seeds and their poor, imperfect and wasteful nature in this State were referred to earlier. This programme is aimed at correcting this waste. A World Bank team visited the University and the agricultural research stations in the State in order to recommend World Bank for the further development of agricultural education and research in the State. Some of the R&D programmes in agriculture now being considered by the State Planning Commission Science and Technology Plan Committee might come under this financing. A start in systems science is being made with the establishment of the school of automation in the Indian Institute of Science, Bangalore. The school is applying systems engineering to our problems with regard to certain projects for the IAF and to a study of industrial process control. It points out that much of our technical education is outdated and suggests some models for education policy funding, and training students in needed skills. The systems approach should be applied to the social field by our social scientists. One of the areas under study is the Regional Engineering Colleges which are centrally sponsored but managed by the States. The States have not been able to take over the full recurring costs of these colleges as they had promised at the end of the Third Plan. The States are reluctant to take over the full expenditure because of their tight resources position and the higher per student costs of these colleges. They are affiliated to the local university where they state that they meet resistance for innovations from other engineering colleges. Hence three alternatives are under study. First the colleges should be managed from Delhi by a Central agency-which is against all norms of making the college serve the local industry. The second is to make it a university. They are too small for this. The third alternative seems less unpractical and technically sound and that is to affiliate them to IITs. But the Union Government taking over technical education institutions is not in the interest of either the Country's education or its industrial development. The State and the local authorities and industries should have a voice in planning and operating these institutions.

Science :

A National Welding Research Institute at a cost of Rs. 2 crores is to be established with the help of UNDP in the industrial complex of BHEL, Tiruchi. The Institute will disseminate knowledge, render consultancy and quality control services in the fabrication industries, welding machinery and consumable producing industries. It will train engineers in welding, testing and certification facilities, undertake designing and testing of welding machinery which is absent in the Country and coordinate Indian and International standards in welding. This is one of the projects in the NCST plan and research facilities now

available in Tiruchi should be used to start the Institute without waiting for the building and new equipment to arrive. The NCST Approach Paper was discussed again at a Delhi seminar at the end of May where it was generally endorsed. Special emphasis was placed on creating a national information system, upgrading the Forest Research Institute and on making an integrated approach to natural resources where demand will double by the end of the century. The plan itself is running into rough weather with the Planning Commission and the substantive ministries. The Commission feels that NCST has wasted too much time on preparing the approach paper (there may be some lese majeste here) but is right in emphasising that it is programmes and projects which must now be produced for the Fifth Plan. The major need now is to ensure that sectoral plans and tbe State Plans have the needed R & D component envisaged by the NCST Plan. That is what is being done in this State. The 14 R & D working groups are working with Departments of Governments to ensure that their Fifth Plan proposals include the R & D component. The discussion about our R & D and national laboratories is even more wide ranging. We are spending Rs. 250-300 crores annually on importing technology, much of it repetitive and some of it available indigenously. There seems a continuing gulf between our national laboratories and our industries. The statistics used are really not convincing. It is true that only a small fraction of the processes developed at our laboratories (38 per cent) are used by our industries and the majority (62 per cent) ignored. This is not decisive because R & D is risk involved. Output is not only uncertain, where there is one, its relations to input cannot easily be established. But what is really worrisome is the lack of real, close and integral links between the laboratories and industry. Efforts are now being made to close this gap by CSIR (see Vol. III page 359), and the various measures to screen applications for import of technology and operate a central R & D data bank can help to close the gap. But one basic question is posed. Is there a lesson to be learned from the AEC experience where there is a single agency for R & D, production and sale? Without going all that way, should we not start locating metallurgic R & D in SAIL, minerals R & D in the Coal and Minerals Authority, and merge the appropriate National Laboratory with these holding companies? That would be a start in forging the link. It would also help the scheme of CSIR and the Ministry of Science and Technology to bring back some of our good scientists and technologists now working in foreign countries. In addition to offering them industrial licenses, facilities for importing capital goods etc., if they were working in the major public sector industries—fertilisers, steel, coal etc.,—they will be able to use freely their know how and have all the equipment they need.

Health :

The Union Government has appointed a 22 member committee to advise it on the special nutrition programme under which children and pregnant and nursing mothers are being fed at 25,000 centres for 300 days in the year. This key programme is being intensified in the Fifth Plan and is becoming part of a package of health, family planning, nutrition and adult education services in the State. The lack of medical research in this State due to multifarious causes, including lack of research staff, lack of interest of medical and non-medical personnel, lack of equipment and buildings is the subject of the R & D sub-group on medical research working under the State Science and Technology Plan Committee. A regional Family Planning Centre at a cost of Rs. 8 lakhs has been established in

Vishakapatnam which might help the southern region to better its good family planning record referred to in the last issue of the Bulletin (page 431). Its sterilisation of 8.30 lakhs is high and its rate of 32.6 per 1.000 is higher than the national average of 24.2 per 1,000. It is now necessary to get the people and educators involved in this programme and not only the medical personnel. One retrograde step is the reduction this year in the R & D funds on birth control and the danger of this being reflected in the Fith Plan. This year's birth control R & D allocation to the ICMR has been reduced to one third of last year's—at Rs. 12 lakhs. Ongoing progammes which have been interrupted and new techniques which are being developed should now be completed and should go into production. For this the R&D funds for this year must be reinstated. This seems to give some grounds for the demand for a separate Family Planning Ministry at a time when we need an integrated and not a separate approach in every development field.

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V. Employment

The steady increase in the Country's unemployment and educated unemployment referred to in Vol. III pages 36 and 43 of the Bulletin) and the disturbing future trends outlined in the report of the agricultural subgroup of the Bhagwati Committee (see last issue page 432) are related to two factors. The first is set forth in the dissentingncte of the Bhagwati Committee which states that "the problem of employment creation basically hinges upon wider diffusion of income opportunities". Unemployment will not be solved in the Country until we have a system in which incomes are generated at the lower levels both through increased productive activities and equitable distribution of existing incomes. This involves reforms of institution and structures, in landed property, in ownership of producing units, etc. and overcoming all the opposition that such reforms bring up. The ad hoc crash schemes are necessary temporary palliatives which do not touch the core of the problem. The second factor is that the structure of our labour force has hardly changed—except for the worse over the past 70 years. With all the limitations of our labour force statistics, what we do have shows that in 1901 the structure was 71.76 per cent in primary, 12.61 per cent in secondary and 15.63 per cent in tertiary sectors. After all our industrialisation, urbanisation and planning since the last two decades, in 1971 we are 72 per cent, 11.1 per cent and 16.7 per cent in the three sectors. Where the pattern has worsened is in regard to landless labourers who were 16.89 per cent in 1901 and are now 26.3 per cent. This strengthens the first comment that the employment problem is largely a socio-political problem. Meanwhile the programme of employment of educated unemployed is being executed with some speed and the Union Planning Commission has received State schemes which will create 6 lakh jobs this year. The schemes have been examined by the employment cell in the Commission and Rs. 93 crores

out of the Rs. 100 crores budget provision have been allotted to the State. But here again there is a gap between plans and performance. The major accent of the programme is on self employment through provision of minimum funds from the Government (called seed money) and maximum utilisation of institutional funds. These latter funds must come from the nationalised banks and the problems here outlined for small industry, entrepreneurs in Vol. III page 352 of the Bulletin are multiplied many times over for the educated unemployed. The banks have to function within their banking contraints and to expect them to provide maximum funds on personal security to the unemployed is not realistic. The State Planning Commission has brought the bank representatives and the Government authorities together to resolve this dilemma. Also the scope of the Government funds now used for margin money, training facilities and counselling services will have to be widened. A more practical approach, following the Bhagwati Commission report, is the 50 per cent subsidy for one year given to private firms to employ engineers, architects and graduates from scheduled castes and scheduled tribes and matriculates from the scavenging community. Tamil Nadu is one of the four States where this programme is to be intensified. Only these form a very small part of the total unemployed. The national census scheme of small industries, earlier referred to in the State industrial section, will provide 1 year employment to 4,000 persons, after which they face a problem. Another programme also referred to earlier is the scheme to provide easy loans to unemployed agricultural graduates and engineers to set up a network of agro-service centres. Among the innovative employment programmes, is the Kerala polytechnic scheme under which 10 unemployed medical graduates are employed in each polyclinic, calling for Rs. 1 lakh capital in urban areas, Rs. 50,000 in towns and Rs. 25,000 in rural areas. 85 per cent of this sum is to be provided by the banks. 10 per cent by the Government and 5 per cent by the medical staff. The first polyclinic has been started in Srikakulam and its working shows how practical and effective this scheme is. Another such programme is the West Bengal dairy scheme under which 500 educated unemployed have been employed. The dairy has purchased cross bred cows which yield 2,500 litres (against the ordinary 250 litres) a year. Here again the functioning of the scheme depends on the prompt availability of credit.

This State has received an allocation of Rs. 14.6 crores out of the all India total of Rs. 238.22 crores for the various employment programmes referred to in the last issue (page 434)—special employment schemes for the State, the crash scheme for rural employment and the half a million job programme. All the programmes are being coordinated by a special unit in the Department of Labour and Employment under the direction of the Minister for Industries. Under the programme of half a million jobs for educated unemployed, the State has received the Union Planning Commission's approval for providing employment for 45,000 unemployed with an allocation of Rs. 6.5 crores along the following lines : (a) one year employment is to be provided for 8,200 secondary grade teachers and 2,000 craft teachers, after which they will have to be absorbed in the State's teaching force ; (b) 2,600 youth service corps volunteers with the usual monthly stipend of Rs. 175. The condition to absorb them after their 2 year service in Government is causing problems and the Goverment is likely to abandon this scheme; (c) the State Electricity Board will employ 100 engineers and 100 diploma holders ; (d) under the subsidised private employment scheme referred to earlier 400

engineers and 300 diploma holders from SC & ST are to be employed; (e) under the agro-service centres schemes, 300 will be employed, (f) under agricultural programme 5,000 graduates, 7,000 diploma holders and 3,200 engineers are to be employed; (g) under a poultry farming scheme 500 agricultural graduates will be employed; (h) under various co-operative schemes—fisheries, tractors, repair and maintenance some 2,500 will be employed; (i) under the transport department 1,000 will be employed. All these schemes have to be further worked out in detail, their finances particularly from the banks and the unemployed clearly established and their continuing employment after this year ensured. It is unlikely that all the schemes can be executed and some will not get on the ground before the end of the year. A new programme that is developing is the training of full time career agents for LIC. The Madras Centre along with 13 others is training 15 graduates each to both pre sale advice to those going in for insurance as well as after sales service to policy holders which till now has been completely absent. Here is a growing employment avenue as only 10 per cent of all families are so far insured in the Country. These full time agents will therefore both grow in number and promote savings in the State and Country. Further to youth against famine campaign in the State reported in the last issue of the Bulletin (page 434), 300 students from Government Arts College, P.S.G. Arts College and the Gandhi Peace Foundation, Coimbatore ran a campaign in Vadugapatti and Sulur. During a three week period, they worked on improving and building roads and broadening and deepening the ponds in the area. The response of students and teachers to this small programme is heartening and indicates that a planned effort for all youth, particularly college youth, can be organised in the State as a means for introducing some elements of practical, community service in the present academic curricula.

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VI. Other Items

ICSSR Review Committee:

The Sixth Session of the ICSSR Review Committee met in Calcutta on 18th and 19th of June. 50 social scientists from West Bengal, Assam, Orissa and Bihar met the Committee and formed themselves into five groups to discuss disciplinary priorities and ways of ICSSR further helping disciplinary and inter-disciplinary research. The relations between the Council and the disciplines of history, linguistics and culture generally were extensively discussed and the specific research problems of the North East region and the desirability of decentralising the decision making processes of ICSSR were highlighted. In a meeting with 10 users of social science research, the importance of research on implementation of land reforms, the organisation of rural labour, the slum improvement programme and urbanisation were emphasised. The committee also met with the Vice-Chancellor of Calcutta University and Registrar of Orissa

University at which the means of developing in the Universities small inter-disciplinary structures with the help of ICSSR and the reducing of the teaching load of university professors in order that they may devote more time to research were discussed and agreed upon. The committee also reviewed the revised statistics of ICSSR grants by discipline and States and decided to recommend special help to disciplines and States which had not benefited from ICSSR resources adequately, in light of some further information that it requested. It reviewed the recommendations of the Lucknow, Hyderabed and Allahabad colloquia on ICSSR and took note of the serious criticisms offered in some of their reports. It continued its discussions of the role of ICSSR—past and future—and arrived at decisions on the major issue of the measure to promote the autonomy of the Council.

International Council of Adult Education :

The first meeting of the Council was held on the 4th June, 1973 in the International Labour Office, Geneva, and was attended by the following members :

Dr. Malcolm S. Adiseshiah	(President)	India
Mr. Ray J. Ast, Jr.		U.S.A.
Mr. Paul Bertelsen		France
Mr. Alexander Charters		U.S.A.
Mr. Paul B. J. Chu		Switzerland
Mr. Yehezkel Cohen		Jerusalm
Mr. Ahmad Fattahipour		Iran
Mr. Gordon Hopeton		Jamaica
Mr. Paul Lengrand		France
Mr. Premyal Maydl		Czechoslovakia
Mr. Bruce Roberts		Australia
Mr. J.R. Kidd	(Secretary-General)	Canada

There was a general exchange of views on the meaning and content of adult education. Adult education refers to all forms of education outside of the school and college structure ranging from continuing education for adults to out-of-school and out-of-college education for drop-outs and push-outs and adult literacy. Adult education is a profession which calls for training and certification. It is a movement which calls for legislation. It is practice in the field, with flexible techniques and technologies. Whether it is also a discipline calling for research is an open question, as adult education is all embracing. It was decided to continue this dialogue by inviting each member to send the Secretary-General by June 30th a personal statement on what adult education is.

The following 19 countries are members of the Council : Australia, Canada, Germany, Ghana, Guyana, India, Israel, Jamaica, Japan, Kenya, New Zealand, Nigeria, Philippines, Singapore, Tanzania, Trinidad and Tobago, United Kingdom, United States and Venezuela. In addition two regional associations, the African Adult Education Association and the Asian Association (ASPHBAE) are members. The Council admitted Yugoslavia and Zambia as members. In addition it noted

that negotiations are underway with the following countries for membership: Barbados, Scotland, Switzerland, Thailand, Sri Lanka, Indonesia, Costa Rica, Colombia, Brazil, Cuba, Sudan, Botswana and Norway and with the following four regional organisations: North America, South America, European Bureau and the South Pacific Commission. The Bureau of the conference was authorised to admit further countries and organisations as members in the period before the next meeting of the Council.

The Committee received with great appreciation the President's information that President Nyrere of Tanzania had agreed to be the Honorary Patron of the Council and conveyed to him good wishes and thanks in a cable.

The constitution of the Council in terms of its aims and objectives, its membership, its organs, its programme and its budget and legal provisions together with its by-laws, were debated. On this basis, the Secretary-General with the agreement of the Bureau of the Council would circulate a draft constitution to all members, in light of whose comments, the constitution will be adopted by the 1974 meeting of the Council.

The programme of the Council approved for the year consists of (a) the documentation centre operated by the Syracuse University which will make available printed materials on adult education, bibliographies and abstracts and purchases and sales of publications, (b) publication of the journal, Convergence and a newsletter, (c) publications of translation of important books, adult education classics, a history of adult education, labour films and the effective use in adult education of multi-media, (d) a seminar on the environment and adult education possibly in Europe, a conference on post-secondary recurrent education for the Pacific countries sponsored by Japan, an African Adult Education Conference in Addis Ababa, and an international seminar for representatives of National Associations by the National Institute of Adult Education at United Kingdom. The relations established by the Secretary-General with UNESCO and ILO were noted with satisfaction. Similar relations with ECAFE and FAO will also be developed.

The core administrative budget for the Council of $ 60,000 was approved for the year together with a post of a full-time Assistant Secretary-General to deal with the growing volume of work. On this basis, programme and project grants offered by national governments, private foundations and international organisations would be received and administered.

The first meeting of the Council was very largely exploratory and aimed at establishing the general ethos and lines of development of the Council for the future.

Central Advisory Board of Education :

The Standing Committee of the Central Advisory Board of Education met at Vigyan Bhavan, New Delhi on June 13. It was attended by 10 State Ministers of Education and 5 educators and the member in charge of education in the Planning Commission. Its main task was to examine and establish a revised educational programme for the Fifth Plan. Its work was facilitated by the two day meeting of education Secretaries of the States who are members of the Standing Committee. The guidance of the Union Minister and the clarity of the documents prepared by the member-secretary were of great help. The results of the meeting are analysed under the education section in the current issue.

Science and Technology Plan :

The first meeting of the Committee of the State Planning Commission for the Tamil Nadu Science and Technology Plan met in Ezhilagam on June 21. It was attended by the 15 members and the secretaries to Government and directors of departments involved. It had before it a draft report composed of a historical introduction, a summary status of S & T in the State as Chapter I, some policy directives as Chapter II, some 80 R & D projects formulated by scientists and departments covering the natural, engineering, medical and social sciences as Chapter III, the outlines of the future S & T infrastructure in the State as Chapter IV, and problem of finance and machinery in Chapter V. The Committee's review and decisions are analysed under the perspective plan section of the State in this review. Currently 14 groups are at work elaborating and finalising the R & D projects and a consultant is helping on evaluating the past and current status of science and technology in the State.

Symposium on Education towards a Non–Violent Social Order :

Indian Council of Peace Research :

At two meetings of the sub-committees of the Council at the Gandhi Peace Foundation in New Delhi on May 8 and 29, it was decided to organise a symposium in January 1974. Education has been looked upon as the harbinger of a new society by all social reformers or philosophers. The very definition of education has now undergone a radical change from the old concept of mere transmission of values, knowledge and skills as conceived by the adult world to the younger generation. Education today is the result of the process of interaction between men, the environment and the society. Education is co-terminous with life itself-thus becoming the education for life and through life. Education in the larger sense can be a powerful instrument for the transformation of society. Being deeply interested in the quest for a non-violent social order, and believing education is the most powerful instrument of social transformation, the Indian Council of Peace Research has launched on a Research and Study programme to explore a non-violent social order. It decided to invite a Symposium on Education Towards a Non-violent Social Order on behalf of the Indian Council of Peace Research in January, 1974. The dates of the proposed symposium are 8-12 January, 1974. These dates are to facilitate some of the participants of the International Peace Research Association Annual Conference scheduled to be held from 3 to 7 January 1974 in India to attend this symposium. The number of delegates to be invited will be around 450. 20 of them will be invited from abroad including Asia and Africa. There will be 20 Indian participants. The basic theme will be education for a non-violent social order. All aspects and levels of education in the broadest sense will be considered. Three sub-themes which will be studied in depth are : (a) Concept of Non-violent social order; can Education make a new society? (b) Education as a life-long process for self-development and quality of life, (c) content of education for a non-violent social order; planning and priorities. There will be one basic paper highlighting issues selected from the reference materials that will be prepared. The reference materials will include : (a) brief summary of the report of the International Commission on Education appointed by UNESCO under the chairmanship of Edgar Faure—'Learning to be'; (b) education for non-violent social order; Gandhi's contribution; (c) some world experiences in education towards non-violent

social order. It is hoped that the Symposium will spell out ingredients of education which will contribute to the evolution of a non-violent society and provide guidelines for the reform and transformation of the existing system of education.

Seminar on Plan Implementation :

The following have accepted the invitation to participate in the Seminar on Plan Implementation which is to be held in Rajaji Hall on September 21 and 22 (see Vol. III pages 437, 438 and 439 of the last issue).

Mr. Harbans Singh, I.A.S., Secretary, Industries

Mr. M. M. Rajendran, I.A.S., Secretary, Public Works

Mr. C. G. Rangabashyam, I.A.S. Secretary, Rural Development & Local Administration

Mr. H. M. Singh, I.A.S., Secretary, Health and Family Planning

Mr. D. K. Oza, I.A.S., Secretary, Social Welfare

Mr. R. Natarajan, I.A.S., Secretary, Co-operation

Mr. L. M. Vasagam, I.A.S.

Mr. P. M. Belliappa, I.A.S.

Mr. T. V. Antony, I.A.S.

Mr. S. V. Chittibabu,

Mr. K. A. Sundaram, I A.S.

Dr. Ramdas

Mrs. Mary C. Clubwala Jadhav

Mr. S. Narayanaswami, Chitra & Co. Southern India Chamber of Commerce)

Mr. K. M. Mammen Mappillai (Hindustan Chamber of Commerce)

Mr. A. K. Sivaramakrishnan (Madras Chamber of Commerce)

Mr. V. Ramamurthi, I.A.S.

Mr. J. S. Bhango, I.A.S.

Mr. J. Sachithananda Rao

Mr. Rama Arangannal, M.L.A.

Mr. V. Ramiah, CSIR Complex

Mr. G. Rangaswami, Vice-Chancellor, Agricultural University.

The following speakers have indicated their acceptance :

Mr. T. A. Varghese, I.C.S., Retd.

Mr. M. G. Raja Ram, I.A.S.,

Dr. B. Natarajan,

Mr. J. Shivakumar, I.A.S.

Mr. V. Krishnaswamy, I.A.S.

Dr. Sukhomoy Chakravarty

Mr. K. S. Sivasubrahmanyam, I.A.S.

Dr. V. Shanmugasundaram

Mr. N. Mahalingam

Dr. S. Sivasubramaniam

Dr. B. Maheshwari

Dr. A. Ramaswami

Dr. Malcolm S. Adiseshiah

Hon. Mr. C. Subramaniam

Papers to be read at the Seminar have been received from :

Thiru N. Mahalingam and

Thiru Krishnaswamy

July Development Seminar :

The paper for the July Development Seminar, Agriculture in Tamil Nadu, by Dr. T. Venkataswamy, Professor and Head of the Department of Economics, Presidency College, Madras, together with a summary of the discussion at the seminar chaired by Mr. R. Ramanujam, Professor of Economics, Sri Vaishnava College, Madras, appears as the first article of this issue.

Second Article :

An article on the Clash of Value Systems appears as the Second article.

AGRICULTURE IN TAMIL NADU

By

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I. Introduction :

1.1 Although it is a well established fact that historically agrarian revolution had preceded industrial revolution in most of the Western countries and that in Japan revolutionary progress in agriculture—which may not be considered as an agrarian revolution of the Western type—took place side by side with industrialisation and that agricultural progress contributed in a considerable measure to the rapid industrialisation of Japan, there still exists some debate in under developed countries whether industry or agriculture should be given the prime place of importance in any ordered programme of economic development.

1.2 Our earlier experience has revealed the limitations of an over-emphasis on industrialisation and it is increasingly recognized that agricultural progress, especially in a country where the majority of the people live on farms is a strategic element of great importance in the development process.[1] The importance of agriculture was realized rather slowly and grudgingly by our planners who had in the beginning pinned their faith on industrialisation for rapid economic progress. The comparative neglect of agriculture was perhaps the major reason for our failure on food front resulting in frequent food shortages and famines and, consequently, the nation was forced to import foodgrains on a massive scale which were a drain on our slender foreign exchange reserves. The realisation of the importance in the economic development of the country on the part of our planners eventually led to a gradual increase in the investment on agriculture, as revealed by the following table[2]:

TABLE I

ALLOCATION OF INVESTMENT IN THE AGRICULTURAL SECTOR IN THE PLAN

PLAN		*Investment in Agriculture as a percentage of planned investment*
I	...	10.2
II	...	4.8
III	...	14.0
IV	...	16.0
V	...	19.3

1. "If India's Five Year Plan could increase the productivity of farming by 20 per cent, that would do more to release resources for production of comforts than would exclusive reliance on promoting industry."

Samuelson, Economics, p. 750.

2. A. Nag, "Raising Farm Productivity is key to Farm Development Economic Times, Bombay, March 12, 1973.

II. Objectives and Implications of the Agricultural Plan :

2.1 *Greener Revolution* : The Report of the *Task Force on Agriculture* for the period 1972-1984, published in two volumes, bears the impressive title: "Towards a Greener Revolution". The first volume deals with the targets for the various crops and the second with the conditions essential for achieving the targets. The Greener Revolution is to be achieved "by increased application of science and technology to the entire gamut of agricultural production including dry farming areas." It is doubtful whether a Greener Revolution on the scale suggested by the Report can be achieved because of three reasons. First, our past performance as regards growth has not been very promising. Second, a green revolution has taken place in Tamil Nadu mainly in the production of rice. Even in this limited field, we may encounter the problem of sustaining the green revolution i.e. the second generation problem of green revolution. The farmers may be expected to produce enough rice in future only if it is profitable to do so and profitability depends on cost-price relationships. The third problem, as admitted by the Report itself, is that "the benefits of the Green Revolution have yet to be spread in the production of other crops, viz., pulses, cotton, oilseeds, vegetables and fruits", and, as we shall see subsequently, it is not easy to achieve significant increase in the production of these crops within ten years.

2.2 *Implications of Green Revolution*: We would legitimately expect a Report concerned with "Greener Revolution" to analyse, atleast briefly, the economic and social implications of the Green Revolution, particularly because contradicting and sweeping statements have been made by different economists on the consequences of green revolution. Mrs. Frankel observes that "the majority of farmers—probably as many as 80 per cent in the rice belt—have experienced relative decline in their economic positions."[3] Millikan and Prebisch do not agree with this view.[4] The Director-General of FAO told the second meeting of the World Food Congress that "unless the Green Revolution was carefully managed, the result might be a conflagration of violence that would sweep through millions of lives." Whatever might be the validity of such forecasts of dire consequences of Green Revolution, the Task Force ought to have analysed the economic and social aspects of Green Revolution. Such an analysis is important to achieve the avowed objective of the Task Force of raising the standard of living of the rural population depending mainly on agriculture and the overall objectives of the Perspective Plan of attacking the worst forms of poverty and bringing about social justice by reducing economic and social inequalities.

2.3 *Objectives*: The objectives set forth by the Perspective Plan for Agriculture are :

1. Provision of balanced diet for the people,
2. Supply of adequate raw materials to agro-based industries.
3. Raising the standard of living of the rural populace.
4. Earning and saving of foreign exchange.
5. Providing large part of additional employment.

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3. Mrs. R. Frankel, "India's Green Revolution—Economic Gains and Political Costs."
4. Max F. Millikar : "Seeds of Change ".
   Raul Prebisch : "Partners in Development."

2.4 An analysis of the implication of the objectives :

1. *Provision of balanced diet* : This is, no doubt, a very desirable objective. But the question arises how to realise the objective. According to the report cereal production in Tamil Nadu is adequate to meet the requirements; but the production of protective foods like pulses, oils and fats, fruits and vegetables will have to be increased to reach the balanced diet requirements provided by nutritional experts. Prima facie it looks as if that the objective can be realised provided the targets of protective foods are achieved. This is not really so unless requirements get transformed into demand and food habits of the people coincide with nutritional requirements.

2. *Supply of raw materials to agro-based industries* : Steps must certainly be taken to ensure adequate supply of raw materials to agro-based industries, if lack of raw material supply is the major reason for the difficulties experienced by these industries. The objective, however, can be achieved not only by increasing the local production, if that is economically possible and profitable, but also by importing the raw materials of the required quality whenever such imports are more economical than local production.

3. *Raising the standard of living of the rural people* : This is a very laudable objective and one of the objectives of the overall Perspective Plan is to attack the worst forms of poverty. The standard of living of the rural people is, in general, low compared with that of urban population. Sixty per cent of the people of Tamil Nadu are estimated to be living on or below the 'poverty line' and according to one estimate 64.5 per cent of the rural population and 35.5 per cent of the urban population are below the poverty line. Since agriculture supports 73.37 per cent of the rural population, a great majority of the people falling under poverty line live in rural areas. The Report says that the standard of living of these people could be raised only through stepping up agricultural productivity and production. The Report however, has failed to pay any special attention to the problems of landless labourers, disguised unemployment and exodus of rural population to urban centres and it does not contain any research findings on these problems. Elimination of disguised unemployment and provision of increased social services will also help in raising the standard of living of the rural population.

4. *Earning and Saving of Foreign Exchange* : The objective of increasing foreign exchange is an all India problem; yet each State can contribute to its realisation. However, the contention of the Task Force's Report that Tamil Nadu has great potentialities for earning foreign exchange by increasing the production of export-oriented crops like tea, coffee, oilseeds, maize, spices, fruits and fruit products is not altogether tenable. The scope for increasing the volume of our traditional exports like tea and coffee is severely limited by the inelastic demand in developed countries, increasing competition from other under developed countries and declining real prices. As for fruits, we may be able to export only some special varieties of a limited number provided we succeed in creating demand and capturing foreign market.

5. *Additional Employment* : The term "additional employment", as used in the Report, refers only to a reduction in seasonal unemployment by introducing High Yielding Variety programme, Multiple Cropping Patterns and Tube wells which would keep the agriculturists engaged for longer periods than at present.

III. Overall Growth Rate and Total Outlay :

3.1 In order to realize the above objectives, the Perspective Plan on Agriculture aims at a compound growth rate of 5.5 per cent per annum on crop production by spending an aggregate investment of Rs. 540 crores in a 12 year period.

3.2 We would like to emphasize, even at the outset, that the target of 5.5 growth rate is too ambitious and unrealistic. Our past record both at National and State level shows that the realized growth rate has consistently fallen much below the target rate of growth. The gap between target and achievement has persisted throughout the last twenty years. The proposed growth rate for agriculture in Tamil Nadu is about double of the actual growth rate realized in the past. Such a doubling of growth rate may be feasible only if the future conditions are going to be extremely favourable for rapid growth and the Report does not adduce any evidence of such favourable conditions in future. Moreover, as we shall see subsequently, the targets on a number of individual crops are clearly unattainable. In many cases, the targets set reflect not the realities of the situation but only over-enthusiasm or wishful thinking on the part of the planners.

IV. The General Nature of the Report of the Task Force :

4.1 The two volumes on agriculture contain a wealth of data on a comprehensive scale. They also outline the work that has been undertaken by the various institutions and departments concerned with agricultural problems. Hence the Report of the Task Force is surely a valuable piece of documentation for research workers. The first volume, besides enumerating the objectives, deals with 13 individual crops and indicates the present trend in area, production and productivity, projects future requirements and supply, sets the targets and outlines the strategy for each individual crop. The same format of analysis is repeated in chapter after chapter. The second volume deals with such matters as improved seeds, fertilisers, plant protection, tractors and implements, irrigation dry farming, marketing, agricultural price policy, etc. It is essentially a historical and descriptive account of the work done by the various agricultural institutions; it is also, of course, concerned with the tasks ahead.

4.2 We will confine our attention to some of the selected individual crops and will analyse the feasibility or otherwise of the targets set, requirement and supply projections and the proposed strategies to achieve the targets. We will also make occasional comments on the contents of the second volume.

4.3 We are constrained to feel that the Task Force has not paid enough attention to an economic analysis of the various crops considered in terms of demand, cost, price, profitability or rate of return in order to judge the economic viability of the crops. The general tenor of the Report seems to be that we must produce more of everything that is in existence and produce additional crops, irrespective of their economic viability. We cannot, of course, hold the Task Force entirely responsible for the lack of economic analysis, since it is a time-consuming and expertise-cosuming process, requiring data in a suitable form. The Task Force should be really congratulated for bringing out a blue print for agricultural development in a comparatively short period of time by utilizing the available data and technical know how.

4.4 The concept of self-sufficiency or near self-sufficiency pervades the entire report. This is a deceptive and dangerous

doctrine, most of the time, even between different nations; it is much more so when applied to States within a Nation. Interregional and international trade is based upon the doctrine of comparative advantage whose essential validity has never been effectively challenged so far, except on political grounds or on the basis of 'infant industry' argument. The attempt to reach self-sufficiency almost in everything by each State which is a spatial sub-unit of the National economy is economically ruinous and politically dangerous. Instead of trying to reach self-sufficiency with regard to every crop, the Task Force ought to have identified crops with high growth potential and rate of return and concentrated its efforts towards development of such crops.

V. **Foodgrains** :

5.1 We will now analyse the programmes of the Report on some of the individual crops, starting with food grains.

5.2 The food grains production in Tamil Nadu which was about 32 lakh tonnes in the year 1950-51 increased to about 70 lakh tonnes in 1970-71, registering an average compound growth rate of 4 per cent per annum from 1950-51 to 1960-61 and 2.7 per cent per annum from 1960-61 to 1970-71. The area under foodgrains increased from 41 lakh hectares in 1950-51 to 52 lakh hectares in 1970-71, registering an average compound growth rate of 1.3 per cent per year.

5.3 An analysis of the growth rate of production of cereals shows that the main increase in the production of foodgrains has resulted from increased productivity of rice, which registered an average compound growth rate of 3.4 per cent per annum from 1960-61 to 1970-71.

5.4 The Report observes that a quantitative assessment of the food needs is to be made on the basis of (1) population, (2) increment and distribution of incomes, (3) income elasticity of demand and (4) likely changes in tastes. But the Report has not, in fact, taken all these factors into account in calculating the demand for food (Vide 5.6.).

5.5 Compared with the nutritional requirements recommended by P.C. Bansil, the present per capita daily consumption of the various food items does not constitute 'a balanced diet'. While the consumption of cereals exceeds the requirement, the intake of protective foods like pulses, oils and fats, fruits and vegetables falls short of the requirements. The imbalanced food consumption may be due to short supply and high cost of protective foods or due to food habits. Assuming larger availability of pulses, vegetables, fruits and milk in future, the Report estimates that the present per capita consumption cereals of 14 ounces would fall to 12 ounces by 1984–what is just needed for balanced diet. Thus, the Report has estimated the future requirements of foodgrains on the basis of the required consumption per head per day for a balanced diet and the estimated population in future. A similar procedure has been followed in estimating so-called demand for other items, under the heading "Future requirements—Demand and Supply Projection."

5.6 What the Report has attempted to project is the requirement or need for foodgrains and other items, not the demand for them for, as every economist knows, need is not the same thing as demand. The interchange of the words need and demand—as the Report does—as though they are synonyms, is inadmissible in economic analysis. Since need or requirement is not necessarily equal to demand, increasing supply to match

increases in requirement may result in shortages or surpluses. The Task Force has not made any survey of future market demand which is admittedly a difficult task, although it rightly states that the estimation of demand is to be made on the basis of population, increment and distribution of incomes, income elasticity and changes in tastes, It has simply assumed that changes in tastes will occur in tune with nutritional food requirements recommended by the Task Force. Food habits change rather slowly and, hence, the Task Force ought to have formulated a well-designed plan to alter them to suit the nutritional requirements. The Task Force has not undertaken any study to quantitatively assess the increment of income or income elasticity in estimating demand. In short, it has followed the easy way, perhaps due to lack of time, and has estimated requirements instead of demand.

5.7 As regards supply of cereals, Tamil Nadu is to-day at a comfortable position. The Report estimates that the supply of foodgrains will exceed requirements throughout the Perspective Plan period. By using high yielding varieties (HYV), extending irrigational facilities and adopting multiple cropping pattern, the State will be able to step up the production of cereals to such an extent that supply will run ahead of requirements in future. Factors like cost and price of cereals have never been taken into account in projecting supply, although the second volume assumes remunerative prices for farmers.

5.8 The need and supply as regards the individual crops of rice, millets, cholam, ragi, maize and cumbu have been similarly projected, ignoring the economic factors like cost and price.

5.9 Rice occupies a pre-eminent position both in terms of production and consumption. The percentage of rice production to total cereal production in Tamil Nadu increased from 63 per cent in 1950-51 to 77 per cent in 1970-71. As the income of the people increases, people are expected to consume more of rice in preference to millets. It is assumed that the level of consumption of rice would be more or less in proportion to its production as compared to total cereal output. Hence, the Report takes the consumption level for 1970-71 as 77 per cent of total cereal production and the same is assumed to increase steadily reaching 90 per cent at the end of the Sixth Plan period. The future requirements of rice have been estimated on the above assumptions.

5.10 Supply of rice is to be increased by intensive cultivation (the area under paddy would be constant throughout the Perspective Plan period), by using improved varieties especially high fertility strains, applying higher doses of chemical fertilisers, and adopting better water management and plant protection practices. It is expected that the State will reap a surplus of about 12 lakh of tonnes at the end of the Perspective Plan period. The above supply projection has been made under certain assumptions which are questionable. (1) It is assumed that almost the entire area under paddy would be brought under the HYV strains by the end of the Sixth Plan. It is doubtful whether this can be achieved in view of the fact that sizeable areas under paddy are under dry cultivation and some areas suffer from problems of drainage and shortage of water. It is known that the cost of provision of assured water supply to the entire area under paddy is prohibitive. Moreover it may not be technically possible and financially feasible to achieve this objective within a decade. (2) The Report also assumes that the productivity of the existing area under the HYV programme would be increased by raising the

fertiliser input from the present level of 20 kgs. per acre to 50 kgs. per acre during the Perspective Plan period. It does not seem to be possible that the fertilizer application could be increased from 20 kgs. per acre to 50 kgs. per acre within a decade, since it has taken many decades to reach the present panel of 20 kgs. per acre. The assumption that so much fertilizer can be made available in so short a time is not reasonable.

5.11 The Green Revolution in the past has been confined mainly to paddy production, But the Report, as pointed out earlier, does *not contain* any analysis of the economic and social implications of the Green Revolution.

5.12 The important millets cultivated in Tamil Nadu are cholam, cumbu, ragi and maize. The demand for millets is expected to decline with increasing income and urbanization. The present consumption of millets which is 23 per cent of total cereal consumption is likely to decline to 10 per cent by the end of the Sixth Plan period. But this decreased demand for millets for human consumption will be more than offset by the increased demand for other purposes. Large quantities of millets like maize and cumbu would be needed for the manufacture of cattle and poultry feed. Moreover, there is scope for setting up agro-industries for processing of millets into products like starch, maida and corn oil. Therefore, in order to meet the increased requirements for millets, the Report suggests an increase in supply which is to be brought about by extending the area of cultivation, using HYV, applying fertilizers and adopting multiple cropping pattern.

5.13 The targets set for maize in respect of both extension in the area of cultivation and of increase in productivity could not be easily realised. The plan is to extend the area under maize from the present 18,000 hectares to 2 lakh hectares by the end of the Sixth Plan period. The present productivity of 1,055 kgs. per hectare is to be increased to 5,000 kgs. per hectare by 1984. Such an increase in productivity is highly improbable in view of the fact that productivity has actually declined from 1,072 kgs. in 1965-66 to 1,055 kgs. in 1970-71 registering a negative growth rate of -0.4 per cent; in spite of the availability of HYV strains. (See Appendix 4, Volume 1). The Report does not give any explanation for such retrogression in the productivity of maize and it simply asserts that productivity can be increased by about five times within Perspective Plan period ! Moreover, because of the high price of maize, the cost of cattle feed becomes higher in relation to other feeds and this will mean lower than expected demand for maize. Lack of marketing facilities and inadequate demand are known to have come in the way of expansion of maize acreage. An additional problem that will be encountered is finding water for so much area under maize.

5.14 Likewise, the production targets for cumbu seem to be highly optimistic. Doubling of production of cumbu in the next decade does not seem to be feasible in view of only 0.7 per cent growth rate during the last ten years. Cumbu, being mostly a dry crop, farmers are not generally inclined to apply fertilzers in its cultivation.

VI. Pulses :

6.1 Pulses are an important source of protein in Tamil Nadu particularly for vegetarians and for the non-vegetarians who cannot afford animal protein. Although pulses are grown all over the State, they are grown in less favourable areas with very little inputs in the form of irrigation and fertilisers, since they

cannot compete with cereal or cash crops due to the low yield of the traditional variety of pulses.

6.2 The supply of pulses is very much below the requirements and Tamil Nadu is importing a large amount of pulses from other States. The present per capita consumption of pulses per day is 1.65 ounces as against the nutritional requirement of three ounces. Following the usual procedure, the Task Force has estimated the requirements as 16½ lakh tonnes at the end of Perspective Plan period. The Task Force's estimate of potential production by the end of the Perspective Plan period is 7½ lakh tonnes as against the present figure of 1,24,000 tonnes. In other words, it aims at a more than sixfold increase of pulses. The proposed strategy to achieve an increase of such magnitude in the production of pulses consists of extending the area of cultivation in rice fallows, evolving new and improved varieties of short duration and applying fertilisers.

6.3 The estimated supply of pulses seems to be very unrealistic especially in view of the poor growth rate of 0.9 per cent between 1960-61 and 1970-71. (See Appendix-3, Volume I). Over a twenty-year period, the production of pulses has increased from 70,000 tonnes in 1950-51 to only 1,24,000 tonnes in 1970-71. Acceptable HYV strains for pulses are yet to be evolved and the scope of growing pulses under irrigated conditions are very limited. The extension of area under pulses through large scale cultivation in rice fallows does not seem to be promising because of the poor results achieved in Thanjavur District in the last few years despite the sustained efforts made by the extension agencies.

VII. Fruits and Vegetables:

7.1 Fruits and vegetables are important protective foods containing vitamins and minerals and they are essential for a balanced diet.

7.2 There is a wide gap between supply and requirements with regard to vegetables and we are importing vegetables from other States. As against the estimated requirement of about 38 lakh tonnes in the year 1983-84, the present production of vegetables including roots and tubers is less than 11 lakh tonnes. The Report of the Task Force contends that it is imperative to increase the production of vegetables by about 320 per cent in the Sixth Plan period. The strategy outlined by the Task Force to achieve the objective includes the provision of irrigation, marketing, storage and preservation facilities and the evolution of HYV of vegetables. The Task Force also recommends the creation of green belts around the cities and towns where there is great demand for vegetables. This recommendation calls for some comments. The historical experience supports the theory of locational advantage of vegetables being grown in areas which are suited in terms of climate, soil, etc. It is well-known that the cost of land is higher around the cities than elsewhere; labour is more expensive and vegetable is a labour intensive crop.

7.3 Although the present production of fruits is sufficient to meet the balanced diet requirements, large quantities of fruits are sent to other States. The Task Force recommends that the production of fruits must be stepped up by more than doubling the area under fruits in order to meet the increasing internal demand and to export more not only to the other States but also to other countries. It has not, however, clearly spelt out how the area under fruits could be doubled in a decade. Cultivation of fruits not only requires water which is scarce but also a large amount of capital.

VIII. Oilseeds :

8.1 It is well-known that India is one of the foremost countries in the world both in the extent of cultivation and total *production of oilseeds, but not, of course,* in productivity. Tamil Nadu accounts for 12.6 per cent of the total production. However, during the period 1950-51 and 1970-71, almost complete stagnation characterized oilseeds production in Tamil Nadu and during the second decade the productivity of oilseeds declined. The Task Force recognizes the need for arresting the downward trend in productivity of oilseed in order to increase production. But it has not analysed the factors responsible for such declining productivity. Such an analysis is a condition prerequisite to improve productivity in future.

8.2 The Report states that, by improved methods of cultivation like improved seeds, application of adequate doses of fertilizers, etc., "productivity (of groundnuts) could *easily* be increased to 1,300 kgs. in 1978-79 and 1,500 kgs. by 1983-84." But a quick look at Appendix II would reveal that the present productivity is only 927 kgs. and there had been a general decline since 1963-64. Moreover, the Report itself admits that "though the research for the evolution of better strains has been going on, it has not so far been possible to evolve a real High Yielding Variety in groundnut. It is, therefore, essential that research in this aspect should be rapidly intensified to evolve a high yielding variety." And it is generally admitted that discovery and implementation of a HYV takes atleast five years.

8.3 One relieving feature of the Report, however, is that it recognizes the fact that steep variation in prices has been one of the constraints in stepping up production of oil seed crops and that stabilisation of prices is essential for increasing the production of oil seed crops. The Report does not mention anything about our past efforts in this regard and their success or failure. Apparently they have failed and if that is so, it ought to have analysed the reasons for failure and it should suggest new line of action for success.

IX. Cotton :

9.1 While the growth of the textile industry in Tamil Nadu has been steady and phenomenal for, the number of textile mills has increased from 82 in the year 1955 to 207 in the year 1971, the area under cotton, the total production of cotton and cotton productivity have been characterized by fluctuations and general stagnation. The production of cotton in Tamil Nadu during the year 1969-70 which was about four lakh bales constituted only 36 per cent of the total consumption of Indian Cotton by the textile mills in the State. The growth rate in the production of cotton was 4.4 per cent during the period from 1950-51 to 1964-65 but after 1965, however, the production of cotton has more or less remained static due to various factors such as reduction in area due to diversion to food crops in irrigated tracks and diverse seasonal conditions.

9.2 Future requirements of cotton by the year 1984 have been estimated at about 16 lakh bales on the assumption that the present per capita consumption of cotton would be maintained. The Task Force estimates that the supply of cotton of required quality can be increased to about 12 lakh bales by 1984 which will meet 73 per cent of the cotton requirements by the textile industry. The strategy to realise the above level of production consists of extensive and intensive cultivation, increasing the area under irrigation and increasing productivity by using HYV of seeds, fertilisers and plant protection

chemicals. The aim of the Task Force is to increase production of cotton by three times during the period 1970-84. Such a three-fold increase may not be actually achieved if past is any guide to the future. Over the period 1950-51 and 1970-71, the production of cotton has increased from 2.26 lakh bales to 3.58 lakh bales only. A good feature of the Report is that it recognizes remunerative price as a major factor in determining the success of the programme.

X. Fertilisers :

10.1 The Task Force has rightly stressed throughout the Report that the application of fertiliser plays a very strategic role in increasing the productivity of various crops. The amount of fertiliser used per hectare in India is only a fraction of the amount used in other under developed countries like Egypt, Taiwan and Philippines. Eminent economists like Colin Clark have emphasized that India should give top priority to fertilizers and should not hesitate to import them from other countries.

10.2 As the Task Force points out dearth of fertilisers, especially the popular varieties when and where they are wanted by farmers has stood in the way of application of larger dose of fertilisers to the crops by farmers. Demand for fertilisers has always exceeded the supply. A large portion of the cultivated area under rainfed agriculture is not at present benefited by fertiliser application. The supply of fertilisers is scarce and hence, utmost care must be taken in utilising fertilisers to achieve the maximum benefits. The Task Force has, therefore, stressed that research should be undertaken to find out the proper dosages, the types of fertilisers to be applied, the level and time of application.

10.3 The Task Force has estimated the requirements of fertilisers on the basis of a number of assumptions involving recommended dosage, the extent of balanced application, the cropping pattern, the use of HYV strains, etc. But what is more important is to ensure adequate supply of fertilisers at economic prices to farmers. The problem of supply of cannot be solved by the State Government alone. The Central Government must take the lead and assign high priority to the production/imports of cheap fertilisers.

XI. Tractors and Implements :

11.1 The estimated requirement of 1,00,000 tractors as compared to the present 7,000 tractors seems to be very much off the mark. It is well-known that registrations for tractors are not proper indication of demand. Of late, the demand for tractors has declined considerably, except for specific brands like Fergusons. The accumulations and cut downs in production effected by various manufacturers are clear evidence of the declining trend. Of course, the long-term trend may turn out to be different. However, the reduction of ceilings on land-holdings and other progressive land reform measures would reduce the scope for mechanisation in the coming decade. Tamil Nadu has more agricultural labourers per unit area than most other States. Farm mechanization has to be selective in terms of operations, crops and regions, if it is to be socially desirable and economically profitable.

XII. Agricultural Price Policy :

12.1 The Task Force has been wise in recognising that price stability and an incentive-cum-remunerative price to agricultural produce is essential for stepping up agricultural production. Instability of agricultural prices is not peculiar to the

State and the Nation. It is a world-wide problem. The task of stabilising and ensuring adequate or attractive prices for agricultural commodities has always been difficult. In the past the Central and State Government agencies set up for the purpose of stabilizing prices have not been very successful in attaining the objective. Very often the procurement prices fixed have been very unremunerative for the farmers. The Task Force has recommended the establishment of a Price Stabilization Board. It is to be hoped that the Board will achieve some success in stabilizing and ensuring remunerative agricultural prices.

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Summary of Discussion

In the discussion of the paper at the Seminar held in the Seminar room of the Institute on Thursday, July 26th under the Chairmanship of Prof. R. Ramanujam, Professor and Head of the Department of Economics, Vaishnava College, Madras, the introductory comments of the Chairman referred to the fact that the Task Force Report on the Perspective Plan for Tamil Nadu did not specifically cover certain major issues, like land reform, underemployment and disguised unemployment of agricultural labour, wage structure and economics of inputs in agriculture. A notable omission was any mention of the problems besetting the small farmer and the role of aid agencies in dealing with these.

The author, in presenting the paper, made a comparison of the growth rates projected in the report with the Japanese pattern of agricultural development during the years 1868 to 1914. The main features in Japan were the large number of small holdings (about 2.5 hectares), labour intensive methods of cultivation, modernization of methods, leadership provided by a minority of educated middle class owner cultivators, judicious increases in the price of rice and an agricultural taxation policy designed to maintain incentives to higher production. The annual growth rate of agricultural output was only 2.3 per cent and the population growth 0.7 to 1.5 per cent. The Japanese experience seems to suggest that the target of 5.5 per cent annual compound growth rate in agriculture for Tamil Nadu is over ambitious particularly in view of the known gap between plans and performance. The two volume Report provides valuable documetation and contains useful material for further research. Its projections, however, do not touch upon some of the important aspects of the agrarian picture. There is no analysis of the problems of landless labour, the costs of inputs, the causes for low production for specific crops in previous years, the economic viability of the anticipated increase in production and the price structure of agricultural products. Further, assumptions regarding a balanced diet, a higher standard of living, self sufficiency in agricultural production and an appreciable rise in foreign exchange

earnings are not sustained by specific data. The overall impression is that of a plan based on needs rather than on estimates of effective demand. The economics of the plan is open to question.

The caption green/greener revolution was at present primarily applicable to the rapid increase in wheat production and to a lesser extent rice production and the increase in production implied has yet to be extended to other crops, which are in deficit. In this context it was pointed out that the expression "Green Revolution" signified certain changes in the input structure of the production function and changes in structural relationship. While the first phase was under way in the shape of HYV, IADP and agricultural Extension Services, Research and Development, the second was still to be implemented even in terms of formulation of National Policy.

The crucial constraints in the achievement of the targets set for the different crops are soil moisture, timely finance and inadequate extension services. Regarding the inputs of fertiliser and power, the existing demand had already outstripped supply and the gap would be even greater in the Perspective Plan period. Yet another problem was the extent to which the small farmer would respond to new varieties and scientific agricultural practices. The land ceiling problem may also cause a temporary fall in production. The Report paid special attention to the expansion of irrigation facilities, the development of adequate finance for short and long term loans and extension services which would carry the requisite R & D to the farmer in his field. It was expected that distribution of fertiliser by cooperatives and by cards would mean sufficient and timely supply. The response to HYV in rice left no misgivings about the response to similar improved strains in cotton, oil seeds and pulses as these were developed and made available. An area in which there is considerable headway to be made is the provision of agricultural credit by Nationalised Banks to the extent the priorities demand.

The projections for cash crops such as tea, coffee and cotton could take economic criteria into consideration with advantage. Any price regulation Institution for agricultural products had to work in coordination with Central machinery.

In view of the Plan objective of abolition of poverty and the necessity to provide food for millions, the need based approach of the Report was justified particularly in respect of food crops. A record of failures and unfavourable conditions should not serve as deterrents. The targets of increased production envisaged were not unattainable if the necessary changes in production structure and use of the new agricultural technology were resolutely and methodically carried out. It was agreed that the economists in the State should continue the critical study of the perspective plan for agriculture and other sectors as one contribution to the clarification of objectives and viability of programmes.

CLASH OF VALUE SYSTEMS*

Systems and Values:

There are no neutral political or social systems. All such systems are value laden. Progress is then the result or the function of a clash between the different value systems. In our time there are major clashes of value systems. The first is the clash between the liberation movements and the imperialist systems involving the values of colonialism, neo-colonialism and racism and their opposing value.[1] The second is the clash between socialism and capitalism, with the values of equity and freedom in their many overtones in basic opposition.[2] The third is the clash between affluence and poverty at the international, national and sub-national levels, with the values of rights and responsibilities in serious clash. In this note I propose to restrict myself to these three clashes out of the multitudinous ones that characterise our times because they are, I believe, key variables in human progress today, comprehensive in subsuming many other real and apparent clashes and relevant to the majority of our world's people, the people living in the third world.[3]

Liberation Vrs Imperialism :

The liberation struggle against various forms of colonialism and facets of imperialism has been a long clash uniting what has come to be called the third world, and continues to be the source of human progress. The global expansion of European rule and civilization was the result of the first industrial revolution with its accompanying changes in technology, the competition between the rising European nations for trade routes, increased capital inflow in the form of bullion from the conquered Latin American peoples and the planned discovery and exploitation of the raw materials of Asia and Africa. For Africa it involved the slave trade under which 20 million persons were shipped out from West Africa through Capvert and sold to the British, Spanish and Portuguese colonies of North and South America (and as for every 1 African so successfully sold, 20 others died en route, the result was that Africa was denuded by 200 million of its people at this time). As a result, trade with Africa moved towards the coastal and riverine areas including the Cape route to Asia, removing from North Africa the markets which had been left there after the defeat of the crusader. It is not till the oil economy of today that these States have been able to regain in some measure their position in world trade. In Asia by the end of the first industrial era all of it had been colonized or came under the trade and economic hegemony of Europe. Even for China, Japan and Thailand which were nominally independent, the overwhelming power behind the gun boats and cannon fire, the enormous weight of the new

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1. UNESCO: General Conference - 17th Session—Resolutions 10-1 & 10-2, Paris, 1972.
2. Htstory of Mankind ½ The Twentieth Century—George Allen & Unwin, London, 1966.
3. Robert S. McNamara: One hundred countries, two billion people, Praeger Publishers, New York, 1973

* Extracts from a paper presented by Dr. Malcolm & Adiseshiah to the Symposium on the Clash of value systems at the 45th ANZAAS Congress held in Perth Australia on August 13-17, 1973.

trading arrangements and the new material needs brought about by the introduction of new goods meant that their existence depended on the relations, including extra territorial settlements, that they conceded to European powers. The second industrial revolution was followed by a rationalisation of this colonial regime. At the end of it, the peace of the Berlin settlement had left the world divided between settler or coloniser or dominated by a mixture of both.

The chief feature of this period of colonialisation of the world by Europe was on the one hand the studious avoidance of any clash of value systems and the beginning of the liberation struggle and its value system on the other. On the one hand the changes introduced by the colonial power were minimal in relation to its Central exploitive purpose. Plantation agriculture in cotton, sugar, jute, coffee, tea and rubber was needed and to that extent and to that only the subsistence economy was modified. Taxes had to be levied and paid and to that extent a restricted cash economy was introduced. Similarly a certain amount of education had to be provided for their middle men and some rewards in the form of money, status and some mobility afforded to them. Some health measures had to be taken and some roads and railways built for strategic and law and order purposes. In fact this universe was described by a Royal Commission as late as 1930 as a universe characterised by "the placid contentment of the masses,"[4] and all its ills, political, economic, social and human ascribed by one of the visiting sociologists of that time as being due to out-dated spiritual value and degenerate cultural and social traditions and norms.[5]

This colonial period also saw the beginning of the human and national liberation of colonial peoples in the person of its spokesman Gandhiji. The values of truth and non-violence which were the bedrock of his political and social action programme represented a unity of thought and action which was his genius and his heritage to liberation movements everywhere. He did not merely proclaim that the poor shall inherit the earth. He worked to bring about conditions of political independence and social justice so that the poor and the down trodden, the separated and the lost could lift up their heads and demand their rights. This correlation of the ideal with the actual, of thought with action can be established, and demonstrated when there is unity of thought, feeling, speech and action. This heritage of values in application to a particular socio-economic and political context is an evolutionary heritage. In this universe of values in action a distinction must be made between the core and the periphery. The core itself is subject to further extension, modification and development in accordance with the imperatives of evolution. The higher dimension of better human living cannot be arrested at any given point of time. The periphery is the historical moment to which the core must relate. The historical moment of Gandhi is vastly different from that of today, particularly in scientific and technological terms. But in this double evolution of the core and periphery, Gandhi insisted. that there is one constant —Man. Man, his development in all his fullness, material, mental and spiritual, his freedom, his dignity and his sanctity—these are the subject and object of all values and their application to life and

4. Report of the Royal Commission on Indian Constitutional Reforms — H. M. Publishing House, London, 1931.

5. K. Mayo, Mother India—Allen and Unwin London 1930.

society. Colonialisation was, for him, satanic, a denial of all these values.[6]

The aftermath of the second world war which was fought for the four freedoms completed the process begun by Gandhi. The war in the Pacific in particular unleashed forces which shook the foundations of classical colonialism. The political weakening and cultural resurgence of Europe and the new ideologies of equality and fraternity not only gave rise to the determined and tenancious fights for independence in Indonesia, the Indo-Chinese States,. and Africa, they also provided the historical circumstances in which the fight could succeed. The clash of the liberation and imperialist value systems however continues. I am not here referring to the clashes in the remaining pockets of classical colonialism and racism—South Africa, South Rhodesia, Angola and Mozambique. I am referring to the third-world as a whole where political independence has shifted the power centre from outside the Country to within. There is no longer the blame the British or the French or the Dutch alibi available to them. But yet this shift has not been accompanied by a change in military and economic power which remained outside the poor independent countries, producing a situation which the United Nations calls neo-colonialism.[7] The clash today is between the thirst for real freedom, sovereignity and peace of these countries and their being under the control of one or other of the power blocs with the accompaniments of what has come to be called brush wars, which are always staged in the third world. This seems inescapable as peace today in Europe and America simply the nuclear stalemate, the atomi catastrophe that they face. On th economic front the laissez faire and it derivatives forced on the third worl correspond to the turn growth of industrialisation and political—economic control beyond the frontier of the industrializing countries, accompanied by having to open up their markets to the industrial countries through the instrumentality of aid or in some cases gun boat diplomacy. This conflict needs to be recognised and each of us has to choose sides in it.

I believe that this first clash of value systems which I have summarily described as liberation vrs imperialism is a means of our progressing towards the values of freedom and peace.

Socialism and Capitalism :

A second major clash of our time is that between the values of socialism and capitalism. I am here referring to socialism as embodied in the Marxist-Communist doctrine which regards itself as a reliable theoretical weapon in the struggle for the socialist transformation of society, the world wide victory of socialism over capitalism and the triumph of communism as the highest and most just social system. The doctrine which, out of the whole complex of social relations, singles out economic relations as the causative factor of history, independent of human will, is a theoretical frame designed to change the world, not interpret it.[8] As such it was subject to continuous adaptation. When the workers in the major capitalist countries, Britain, Germany and France,

6. M. K. Gandhi: The Story of my experiments with Truth, Navajivan, Ahmedabad, India. 1927. Selected works of Mahatama Gandhi Vol. VI, Navajivan, Ahmedabad, India, 1969.

7. Refer foot note 1.

8. V. I. Lenin, Collected Works, Moscow, 1971.
The Crisis of Bourgeois Ideology and Anti-Communism, USSR Academy of Sciences Moscow, 1972.

instead of overthrowing their regimes organised themselves to share in their rising productivity and exploitation of the colonial areas, the doctrine was extended to predict the colonial conflict between the capitalist countries for colonial markets and raw materials, the liberation struggle of the colonial and exploited subject people, and the emergence of the communist party as the vanguard of the working class and the State as the means of safeguarding socialism and guiding all groups of workers towards an advanced industrial society.

Capitalism in its turn springs from European liberalism, with its values of man as rational, responsible and autonomous, of human development through ensuring individual initiative and enterprise, and of endowed and inherent rights which must be protected and respected. It was a Europe conceived on these lines, in theory believing in the equality of man while in practice maintaining the right and duty to rule and guide the backward peoples of the world, that partitioned Asia, Africa and occupied Latin America as noted earlier. The doctrinal formulations have also had to be reconciled with the realities of economic organisation in nationalised railways, power systems, coal boards and other productive enterprises and in the planning and administration of welfare services, providing state services to the individual from his cradle to the grave.

In both systems there is one uniting factor-science and technology. In capitalist societies, the culture is a science and technology culture on which its dynamic industrial civilization is based. In Communist societies, the proletariat with the party as its vanguard destroys the political apparatus of capitalism but safeguards and develops its technological apparatus, though that frame is socialised. And so in both systems there is an identity of values in science and technology—in mechanised plants, tools, resource use and environmental exploitation but also in the organisation of labour and capital through what is called scientific management, management by objectives et al. This identity is particularly noticeable in the position of workers who, through mechanisation and automation which reduces their physical energy expenditure in quantity and quality, the increase in the proportion of workers in what I call the quartenary sector which comprises the non-production workers, their increased and improved cultural and material standards, are no longer anywhere the revolutionary vanguard.[9]

Another point of similarity between the two clashing systems is the increasingly disaggregated system which communism and capitalism have come to represent. Tito of Yugoslavia applied the scientific dialectic to his national situation, rejecting the Leninist instrument of democratic central ism and organised workers councils and a total decentralized system. Mao Tse-tung redefined class and made a revolution with peasantry rather than the urban proletariat which to Lenin was the revolutionary instrument, the peasants providing merely a supportive transitional role. Fidel Castro's revolution began with a handful of dissident intellectuals whose marxism includes continued loyalty to the Catholic Church. Amilcar Cabal made his revolution with the *petite bourgeosie* of Portuguese Guinea. Equally the capitalist societies of North America and Western Europe despite NATO and the enlarged Common Market have as much which divides them as the capitalist values which unite them. The United States

9. One Dimensional Man - H. Marcuse - Bacon Press Battan, U.S A., 1968

shifting from the position world's moral leader, generous giver and ideological policeman to accepting the constraints of the massive outflow of its resources and drain on its power and the Scandinavian countries practising a pragmatic socialism and a developing welfare State, France with its rationalism and humanism as its 'mission civilizatrice', Japan in its reconstruction fervour outstripping all others economically and Australia and New Zealand experimenting with socialism without the communist frame and so on are pointers to this individualism.

I believe that this disaggregated and variegated clash between the socialist and capitalist value systems is a means of progress both for themselves and the third world. The third world itself inspite of its pretensions and verbiage to the contrary has no ideology. The countries comprising it have no goal but development and even this they can only partly define. They certainly have no theory of what must be done, or how much change to get where. In fact they are faced with and have to respond to a continuing challenge that criss-crosses every possible political, social and economic change. And in this context the false clashes of values that are held upto them are merely a red herring and no avail to them in developing their value and development systems. The hoary tales of agricultural mechanisation destroying (useless low paying) family skills, the labour laws which prevent bringing children to factories, depriving women of "the pleasure of babies playing at their feet", a village pump for assuring safe drinking water for a people facing endemic diseases depriving the tourist trade poster of "the village woman carrying a water pot on her head," laundering vrs clothes washing on a slab which "is an enjoyable form of social intercourse", the money economy and system of fixed prices vrs "the joy of bartering and bargaining", power machinery disrupting dysfunctional machines like handlooms which are supposed to be "body patterned", wage earning vrs the wonders of cattle tending, the happiness of village unemployment vrs "the resistance to cooperative organisation", skipping a grade being a shame because of the "low value placed on precocity" etc.–,[10] I can only describe these and other such presumed value clashes as just non-existent nonsense. These are not values and these are not the clashes facing the third world. They are the gloss which lightens up some of our spurious social studies and imaginations. For the third world the search for an ideology is a hard, long and time consuming task which I believe the current value clashes between the socialist and capitalist system can help to lighten and clarify.

Affluence Vrs Poverty :

A third conflict is the clash between values of the affluent and the poor both internationally and within the poor nations. Internationally the dichotomy is well set. The recently published World Bank Atlas[11] divides the world between 30 countries of Europe, North America, Japan, Australia, and New Zealand where less than one quarter of people live with an annual average income of $ 2,400, and 100 countries with over 2 billion people whose annual income is $ 180. What is worse is that while for the rich countries the problem is to contain and limit growth in order that the disamenities to their accelerating GNP may be held down to increase what is called

10. Cultural Patterns and Technical Change; Tensions and Technology Series, UNESCO, Paris 1953.

11. World Bank Atlas: International Bank for Reconstruction and Development 1972, Washington, March, 1973.

Net Economic Welfare,[12] for the third world the future is as sombre as the present. At their present rate of growth, it will take East Asia 25 years to double its per capita income, Africa 30 years, Latin America 35 years and South Asia 50 years (and I am here talking of increasing the income by a mere $ 100).[13] And so against the enormous armament expenditure (of over $ 200 billion) which the U.N. expert Committee computes is enough to annihilate not only this planet but ten others like this,[14] the wastes, pollution, over eating (in one country in this affluent group over $ 500 million is being spent on slimming)[15] and over spending generally, we are confronted in the third world with over half of its people suffering from hunger and malnutrition, their infant mortality being four times as high as in the affluent countries, life expectancy being 30 per cent lower, illiteracy increasing in absolute numbers at the rate of 5 millions a year and 20 per cent of the labour force being unemployed or underemployed. The U.N. projection is that if present trends continue, by 2000 A.D. the per capita income of U.S. will be $10,000, Brazil $500 and India $200.[16] Such wide international disparities constitute a continuing contradiction of the values of equity, equality, freedom and peace. The responsibility for righting this situation is that of the poor countries. The aid-trade-debt relief effort of the affluent countries in this area is economically marginal and will always be so, even if the Second Development Decade target of 1 per cent of the GNP of the affluent countries and 0.7 per cent in official aid are fully met.[17] The World Bank and OECD conclude that the prospects for even this limited effort are bleak. Against the 0.7 per cent of official aid pledge, the present percentage of OECD countries is 0.34–0.35 percent and will be only 0.37 per cent by the mid-Second Development Decade. 7 countries including Australia are however near this target and it is the others including four of the most affluent who are at a low 0 16 to 0.24 per cent.[18] It is not lack of resources which is blocking aid. In the First Development Decade, the affluent countries increased their income by $1,100 billion[19] and in this Decade I compute that they will increase theirs by nearly $3,000 billion, despite all the discussions about limiting growth. The real obstacles to a necessary and sufficient aid programme are that the values it represents of justice and equity are not part of our

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12. Economics — Paul A. Samuelsen Ninth Edition, Mcgraw Hill, New York, 1972. Limits to Growth: Potomac Associates, New York, 1972.

13. Refer foot note 3.

14. United Nations — Effects of the possible use of nuclear weapons and economic implications for States of the acquisition and further development of these weapons — Report of the Consultative Group, New York, 1968.

15. It is time to begin, Malcolm S. Adiseshiah, UNESCO, Paris, 1972.

16. United Nations-Centre for Development Planning, Projections and Policies, New York, 1969. UNCTAD: Address by President, World Bank, Santiago, 1972 Patners in Development—Report of the Commission on International Development—International Bank for Reconstruction and Development, Praeger, New York, 1969.

17. United Nations—International Development Strategy for the Second United Nations Development Decade, New York, 1970.

18. Development Assistance—Organisation of Economic Cooperation and Development, Paris, 1972.

19. Refer foot note 3.

international system. The popular reasons given about the disillusionment with aid in the aid giving countries is a reflection of the quality of their effort. As long as aid is an instrument of a country's foreign policy, as long as it is tied with buying the the donor countries' equipment and personnel services including military hardware and armaments, as long as the major part of it is used for re-payment of earlier hard loans from the affluent countries, aid will not be an expression of the values of justice and equity. The same considerations apply to trade relations and debt repayment obligations. World trade has been expanding, but 80 per cent of this expansion is shared by the affluent countries and the small share of the poor countries are at the cost to them of deteriorating terms of trade. Within the Second Decade's export target increase of 7 per cent, the export of manufactured goods from the poor countries must increase annually by 15 per cent. But the affluent countries' tariffs on mannfactures from poor countries are higher than these from among themselves at 7 and 12 per cent in the U.S., 9 and 14 per cent in the U.K. and 7 and 9 per cent in the European Community. Coco beans pay 3 per cent but processed coco 18 per cent in EEC, hides and skins are duty free but shoes pay 10 per cent in the U.S., and non-tariff barriers, quotas, subsidies, valuation techniques make the discrimination even wider. Here the 3 UNCTAD recommendations for freeing trade and making it a development instrument are before the affluent countries for equitable and early action.[20] As for the debt problem the total indebtedness of the poor countries stands at $75 billion and the annual debt repayments which stands at $7 billion is increasingly cumulatively (by 18 per cent in 1970 and 20 per cent in 1971)—at double the rate of increase of their exports. There is need here for a long term debt relief and debt liquidation programme, on the basis of the recommendations of the last Colombo Plan Consultative Committee if the developed and the developing countries are to live by the minimum values of justice and well being.[21]

But the clash of the values between the affluent and poor is even more serious within each of the poor countries. In Brazil where in the last decade GNP increased in real terms by 2.5 per cent, the share of the national income received by the poorest 40 per cent of the population declined from 10 per cent to 8 per cent in 1970, whereas the share of the richest 5 per cent grew from 29 per cent to 38 per cent. In Mexico in the last two decades, the share of the national income for the poorest 40 per cent declined from 14 per cent to 11 per cent and that of the poorest 20 per cent from 6 per cent to 4 per cent. In India 40 per cent of the people—that is 200 million men, women and children are living below the poverty line which has been defined at a low $ 5 per person per month, despite the fact that during the past two decades the Country's national income has increased annually by over 3 per cent.[22] In fact World Bank studies show that along with the attainment of a 5 per cent GNP growth during the sixties in the developing coun-

20. Reports of UNCTAD, I II & III, United Nations, New York, 1969, 1970 and 1972.

21. Report of the President—Annual Meeting of the Board Governors of the World Bank, Washington, D. C., 1971.

Report of the Colombo Plan Consultative Committee, New Delhi, 1972 (Unpublished)

22. Report of the President — Annual Meeting of the Board of Governors of the World Bank, Washington D.C., 1971.

Poverty in India — Dandekar and Rath, Economic and Political Weekly, Bombay, India, 1971.

tries, the richest 20 per cent of the people in these countries enjoyed 56 per cent of the national income, while the share of the poorest 60 per cent was only 20 per cent.[23] We have thus come to realise certain hard facts in the third world. First is the clash of the values of growth and social justice in our countries. Increase in national income does not improve the quality of life for our poor majority because the increases do not reach the poor. This has led some of the countries like India to give priority to the value of social justice over that of growth in their future plans. India has decided to maintain for the next five years her growth rate target at that of the last five years, increase the incomes of the bottom 3 deciles by 50 per cent and cut the incomes of the top 3 deciles (which comprise 196.2 million people) by 3.4 per cent.[24] Second there is a clash between two culture – that of the affluent and that of the poor. The poverty problem in the third world is not only that of too few resources chasing too many wants which they do, not only that of backward regions such as North East Brazil, North Thailand and the 56 districts in India declared backward which they are, it is even more than all this a new culture which has developed, the poverty culture with its values of indecency and in humanity. It is the culture which lies beyond the reach of public services and market forces. In my State in India, the Planning Commission defines it thus: "Sixty per cent of the people of Tamil Nadu are estimated to be living at or below the poverty line. Their daily food consumption ranges from 1,000 to 1,800 calories; the sixty per cent illiterates and school drop-outs are identical with this group; they live in urban slums or rural huts with little access to health or hygiene facilities."[25]

I believe that the clash of values in the third world between the two cultures must be faced by the countries and is being faced leading to a wide range of political, social and economic measures. On the political front it means the real participation of the people, the oppressed people, in the political process and the breaking of the strangle hold of the rich and feudal elements over the political system from the federal to the state, district and even more decisively the village level. At the social level all structures and arrangements which make for hierarchical arrangements will have to be brought out into the open and done away with. The transformation of social structures and reshaping of social attitudes towards the values embodied in all our constitutions of equality, justice, brotherhood and integrity must be ensured. In the agrarian sphere, in India 12 per cent of the rural families control more than half of the cultivated land, in Brazil less than 10 per cent of the families control 75 per cent of the land. Land ceilings, security of tenancies, rights to the tiller, control of rents and rural indebtedness, timely supply of inputs to the small farmer, assurance of fair wages to landless labourers are part of the programme demanded.[26] In the industrial sphere the break up of monopoly

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23. Survey of Distribution Patterns in 40 Developing Countries — International Bank for Development and Co-operation, Washington, 1971.

24. An Approach to the Fifth Five Year Plan (1974-79), Planning Commission, New Delhi, India, 1972.

25. Draft Perspective Plan — Frame for Tamil Nadu 1972-84, State Planning Commission, Madras, India, 1972.

26. Agrarian Reform: Food and Agricultural Organisation, Rome 1970. Census of India, New Delhi, India 1961 and 1971 (Provisional) Agrarian Reform in Tamil Nadu, Sangam Publishers, 1973.

houses, control of multi-national corporations and the development of small and intermediate industry and technology are involved. In the economic sphere what is needed is a new style of production which will not simply respond to market forces, as the vast majority of people are outside of the market, do not have the purchasing power to decide what shall be produced at what levels and rates. In so directing this new style and direction of production to accelerate production in the core industrial of iron and steel, fertilisers and pharmaceuticals and the wage goods needed by the poor majority—wheat or rice, edible oil, sugar, kerosene, cloth, housing materials—the tackling of the growing unemployment through the use of new agricultural technologies and labour intensive self employment techniques will be ensured. The clashes here are real and sometimes are most difficult at the micro-level. Against the values of interdependence and gainful international division of expertise are the values of self reliance and endogenous development. Technology transfer has become overly costly, burdensome and a kind of oppression. Foreign aid has been used as an instrument of intervention in Latin America, Africa and Asia. This has led some countries to opt for zero net aid at some sacrifice to their development. In regard self reliance, the countries face an almost daily contradiction. Is the priority to produce more steel or produce it with local know-how and machines? Is it more important to increase power generation to meet the growing industrial and agricultural demand through importing generating sets or should the power generation rate be slowed down so that the machinery is all indigenous? This is also true with regard to employment generating labour intensive programmes. There is often little choice between increase in productivity and generating employment in our countries. Assets creating labour intensive activities which are part of the National Plan are limited in scope. There is no either or answers to these daily economic dilemmas. They have each to be faced and resolved in light of the total objectives of the Country.

Despite and because of the brute fact of the culture of poverty, it is in the cultural area that this whole development process can be humanised and its values returned to the values of man.[27] Education is the key variable in this cultural clash. Education in the third world is class ridden. 80 per cent of the school and college survivors are from the top 20 per cent of the community. Education is denied to and/or rejected by the poor majority. The 60 per cent who drop out of school before the first four years (and so become illiterates in accordance with UNESCO's definition of literacy)[28] along with the very heavy wastage all along the educational ladder, is a function of the mass poverty of the people, not simply the unattractiveness of the teaching techniques and learning methods. Education is dichotomised into a mass school and university effort on the one hand and out-of-school and out-of-college training on the other with no relation between the two. Education with its intellectual vapidity and unadapted foreign models is no longer an exercise in excellence. Education is irrelevant to the pedagogic needs of the mass of the people. The clash of cultures in our countries demand that the poor majority participate in devising and designing the educational system—its structures, its technology and above all its pedagogic content. This must not be done for them, or imposed from above,

27. Pedagogy of the Oppressed—Paulo Frere—Herder & Herder, New York, 1972

28. Literacy in the Mid Century, UNESCO, Paris, 1960

for that would continue the present educational and cultural irrelevance that we face as hangovers from Western imported or imposed models. This is easier said than done, for, as pointed out earlier, the culture of poverty has also its emptiness, its void and its uninitiativeness.[29] Like the working class in the affluent countries who share in the fruits of colonial exploitation, the poor majority are the oppressed and have internalised in themselves the fruits and techniques of oppression. To break out of this bind, education should be seen by all—the poor and the not so poor—as one continuous life long commitment to be had at any place or at any time where an opportunity to practice the skills and values of freedom and equality, compassion and charity and employment can be had. In the process there will be tensions and clashes between groups and individuals because education is a dialogue, it is confrontation, but as they are within the music, drama, literature, fine arts, films, dances, folk lore and above all the spirit of man expressed in the spiritual life, the local group that binds the people into a community, the dialogue and confrontation will be making the kind of men and women that development demands. That atleast is my hope.

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Editor : Dr. Malcolm S. Adiseshiah